SAMSUNG

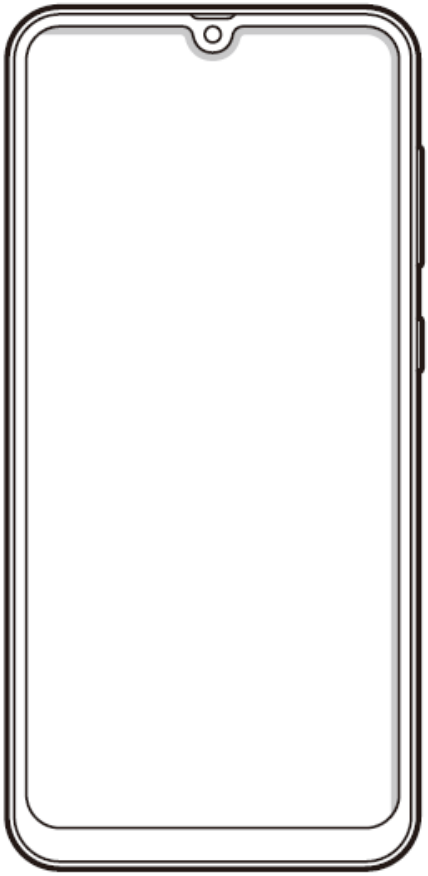
Mobile Device

SM-M307F/FN

Common

SERVICE Manual

Mobile Device



CONTENTS

Notice: All functionality, features, specifications, and other product information provided in this document, including but not limited to, benefits, design, pricing, components, performance, availability, and capabiliti-es of the product are subject to change without notice. Samsung reserves the right to alter this doc-ument or the product described herein at anytime, without obligation to provide notification of such changes.

1-1. Repair Precaution

Before attempting any repair or detailed tuning, shield the device from RF noise or static electricity discharges.

Use only demagnetized tools that are specifically designed for small electronic repairs, as most electronic parts are sensitive to electromagnetic forces.

Use only high quality screwdrivers when servicing products. Low quality screwdrivers can easily damage the heads of screws.

Use only conductor wire of the properly gauge and insulation for low resistance, because of the low margin of error of most testing equipment.
We recommend 22-gauge twisted copper wire.

Hand-soldering is not recommended, because printed circuit boards (PCBs) can be easily damaged, even with relatively low heat. Never use a soldering iron with a power rating of more than 100 watts and use only lead-free solder with a melting point below 250°C (482°F).

Prior to disassembling the battery charger for repair, ensure that the AC power is disconnected.
Always use the replacement parts that are registered in the SEC system. Third-party replacement parts may not function properly.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Many semiconductors and ESDs in electronic devices are particularly sensitive to static discharge and can be easily damaged by it. We recommend protecting these components with conductive anti-static bags when you store or transport them.

Always use an anti-static strap or wristband and remove electrostatic buildup or dissipate static electricity from your body before repairing ESDs.

Ensure that soldering irons have AC adapter with ground wires and that the ground wires are properly connected.

Use only desoldering tools with plastic tips to prevent static discharge.

Properly shield the work environment from accidental electrostatic discharge before opening packages containing ESDs.

The potential for static electricity discharge may be increased in low humidity environments, such as air-conditioned rooms. Increase the airflow to the working area to decrease the chance of accidental static electricity discharges.

2. Specification

2-1. GSM General Specification

Item		GSM 850	EGSM 900	DCS1800	PCS1900
Freq. Band[MHz] Uplink/Downlink		824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range		128~251	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing		45MHz	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period		270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/ Frame Period		576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	GSM/ EGPRS	GMSK/ 8PSK	GMSK/ 8PSK	GMSK/ 8PSK	GMSK/ 8PSK
MS Power		33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class		4(GMSK) E2(8PSK)	4(GMSK) E2(8PSK)	1(GMSK) E2(8PSK)	1(GMSK) E2(8PSK)
Sensitivity		-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux		8	8	8	8

2-2. GSM Tx Power Class

TX Power control level	GSM850	TX Power control level	EGSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3 dBm	17	9±3 dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
-	-	-	-	15	0±5 dBm	15	0±5 dBm

2-3. WCDMA General Specification

Item	WCDMA2100(B1)	WCDMA1900(B2)	WCDMA850(B5)	WCDMA900(B8)
Freq. Band[MHz] Uplink/Downlink	1920~1980 2110~2170	1850~1910 1930~1990	824~849 869~894	880~915 925~960
ARFCN range	UL：9612~9888 DL：10562~10838	UL：9262~9538 DL：9662~9938	UL：4132~4233 DL：4357~4458	UL：2712~2868 DL：2937~3088
Tx/Rx spacing	190MHz	80MHz	45MHz	45MHz
Mod. Bit rate/ Bit Period	42.2Mbps(DL) 5.42Mbps(UL)	42.2Mbps(DL) 5.42Mbps(UL)	42.2Mbps(DL) 5.42Mbps(UL)	42.2Mbps(DL) 5.42Mbps(UL)
Time Slot Period/ Frame Period	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms
Modulation	QPSK 16QAM 64QAM	QPSK 16QAM 64QAM	QPSK 16QAM 64QAM	QPSK 16QAM 64QAM
MS Power (dBm)	25.7 ~ -49(↓)	25.7 ~ -49(↓)	25.7 ~ -49(↓)	25.7 ~ -49(↓)
Power Class	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)
Sensitivity	-106dBm	-104dBm	-104dBm	-103dBm

2-4. LTE General Specification

Item	LTE Band1	LTE Band3	LTE Band5	LTE Band7	LTE Band8
Freq. Band[MHz] Uplink/Downlink	1920~1980 2110~2170	1710~1785 1805~1880	824~849 869~894	2500~2570 2620~2690	880~915 925~960
ARFCN range	UL:18000~18599 DL:0~599	UL:19200~19949 DL:1200~1949	UL:20400~20649 DL:2400~2649	UL:20750~21449 DL:2750~3449	UL:21450-21799 DL:3450-3799
Tx/Rx spacing (MHz)	190	95	45	120	45
Channel Bandwidth (MHz)	5/10/15/20	1.4/3/5/10/15/20	1.4/3/5/10	5/10/15/20	1.4/3/5/10
Modulation	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM(DL only)
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity (QPSK, BW 10MHz) (dBm)	-96.3	-93.3	-94.3	-94.3	-93.3

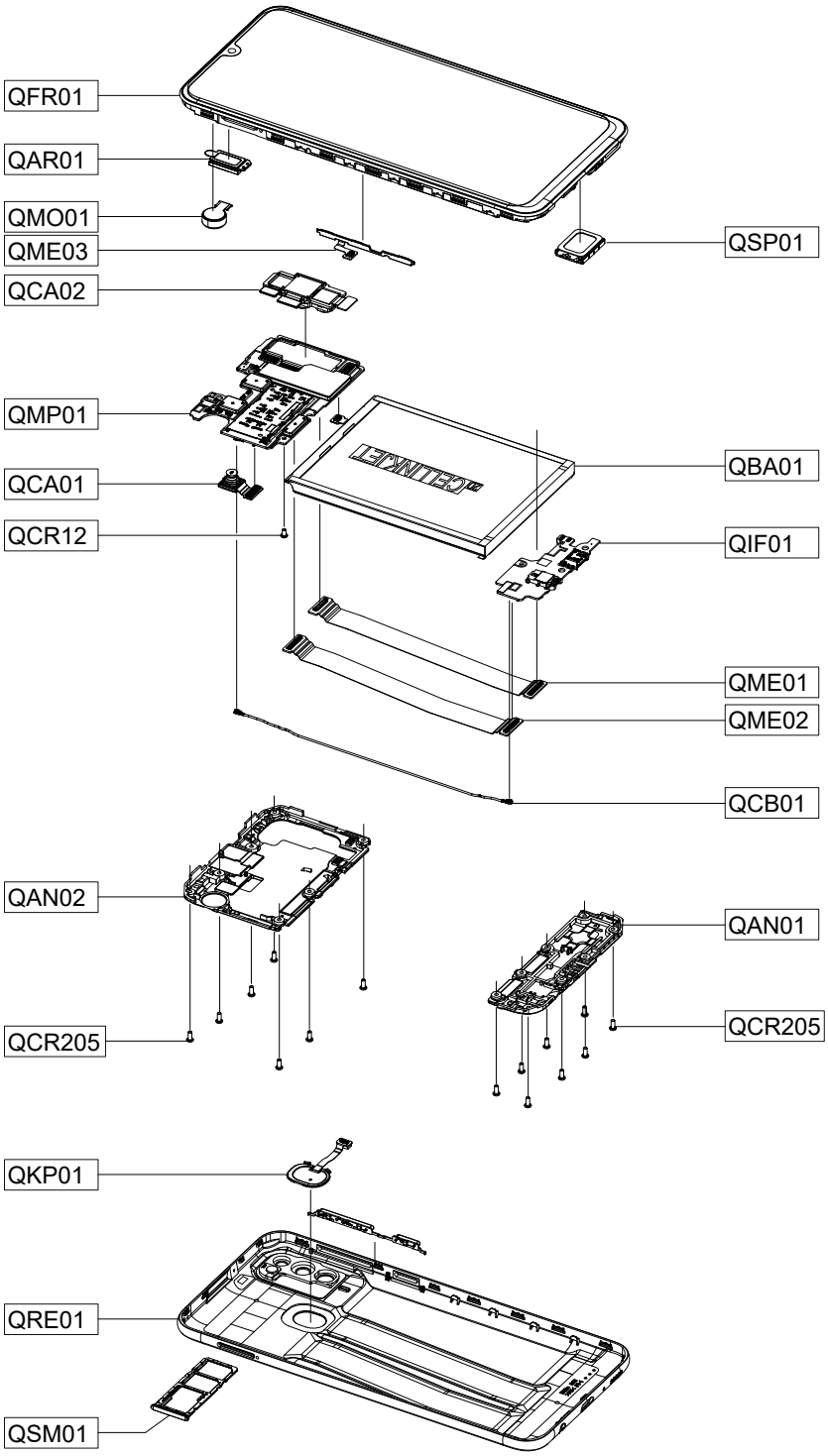
Item	LTE Band20	LTE Band28	LTE Band38	LTE Band40	LTE Band41
Freq. Band[MHz] Uplink/Downlink	832~862 791~821	703~748 758~803	2570~2620	2300~2400	2496~2690
ARFCN range	UL:24150~24449 DL:6150~6449	UL:27210~27659 DL:9210~9659	UL/DL:37750 ~ 38249	UL/DL:38650 ~ 39649	UL/DL:39650 ~ 41589
Tx/Rx spacing (MHz)	-41	55	0	0	0
Channel Bandwidth (MHz)	5/10/15/20	3/5/10/15/20	5/10/15/20	5/10/15/20	5/10/15/20
Modulation	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM(DL only)
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity(QPSK, BW 10MHz) (dBm)	-93.3	-94.8	-96.3	-96.3	-94.3

Main Function

Item	Description
OS	Android P OS V9.0
RF	
	6000mAh
Base Band	2.3Ghz Quad + 1.7GHz Quad
Other RF	GPS, Glonass, Beidou, Galileo / BT5.0 / USB 2.0 / WIFI 802.11 a/b/g/n/ac / NFC(SM-M307FN Only)
	Triple Camera (48MP(F2.0) + 5MP(F2.2) + 8MP(F2.2)) with LED Flash / Front Camera 16MP(F2.0)
LCD	6.4", FHD+, 2400x1080
RAM	4GB / 6GB
Storage	64GB / 128GB
Sensor	Accelerometer, Fingerprint Sensor, Gyro Sensor, Geomagnetic Sensor, Proximity Sensor, Grip sensor
Accessory	Charger: 9V/1.67A and 5V/2.0A AFC charging Data cable: 3.0pi, 0.8m(USB-C) Ear phone: 3.5pi, 4pin

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



※ SVC REPAIR TAPE
QRT01

5. MAIN Electrical Parts List

Parts Code	Design LOC	Description
ZD5013	0401-001110	DIODE-SWITCHING
D5000	0404-001250	DIODE-SCHOTTKY
ZD6005,ZD6015	0406-001561	DIODE-TVS
ZD5012	0406-001592	DIODE-TVS
ZD5001	0406-001728	DIODE-TVS
ZD6013,ZD6014	0406-001781	DIODE-TVS
D5001	0406-001808	DIODE-TVS
ZD6011,ZD6012	0406-001809	DIODE-TVS
ZD1001	0406-001829	DIODE-TVS
LED5000	0601-003768	LED
U2006	1001-001911	IC
U2001	1001-001969	IC
U3004	1001-002065	IC
U3001	1001-002077	IC
U2020	1003-002802	IC
UCP400UP	1105-003012	IC
UME5000	1107-002536	IC
U3005	1201-003869	IC
U1001	1201-004029	IC
PAM1000	1201-004109	IC
PAM1001	1201-004209	IC
U1000,U1015	1201-004219	IC
U6001	1201-004240	IC
U3014	1203-008249	IC
U5006	1203-008251	IC
U7002	1203-008326	IC
U2000	1203-008693	IC
U5007	1203-008719	IC
U5003	1203-008729	IC
U3013,U7000	1203-008865	IC
U3000,U3003,U7003	1203-008867	IC
U7004	1203-008926	IC
U5001	1203-009113	IC
U7001	1203-009220	IC
U5000	1203-009224	IC
U5002	1203-009233	IC
U7038	1203-009245	IC
U6012	1205-005750	IC

U2016	1205-005806	IC
U3015	1205-006087	IC
U3002	1205-006088	IC
UCP400	1205-006177	IC
U3018	1209-002513	IC
U3012	1209-002627	IC
U3016	1209-002629	IC
TH4000,TH4001,TH5000	1404-001724	THERMISTOR
TH1000	1404-001734	THERMISTOR
VR7000	1405-001458	VARISTOR
R5002	2007-000172	R-CHIP
R6024,R6026	2007-003015	R-CHIP
R6022,R6023	2007-007190	R-CHIP
R4002	2007-007310	R-CHIP
R3011,R3012	2007-007317	R-CHIP
R1005,R3002,R4009	2007-007741	R-CHIP
R6003	2007-007741	R-CHIP
R6034	2007-007798	R-CHIP
R5014	2007-007942	R-CHIP
R5006	2007-007946	R-CHIP
R5001	2007-008043	R-CHIP
R7011	2007-008052	R-CHIP
R3000,R3013	2007-008053	R-CHIP
R5024	2007-008055	R-CHIP
R1002,R1003	2007-008056	R-CHIP
R1004,R4008	2007-008419	R-CHIP
R5009,R5011	2007-008483	R-CHIP
R5003,R5004,R5005	2007-008486	R-CHIP
R5008,R5012	2007-008486	R-CHIP
R5020,R5022,R5023	2007-008516	R-CHIP
R5028,R5029	2007-008516	R-CHIP
R6006,R7000,R7001	2007-008531	R-CHIP
R7034	2007-008531	R-CHIP
R6018,R6028	2007-008579	R-CHIP
R4004,R4005,R4006	2007-008588	R-CHIP
R4007,R4011,R4012	2007-008588	R-CHIP
R4013,R4014,R4018	2007-008588	R-CHIP
R4019,R4022,R4027	2007-008588	R-CHIP
R4028,R4029,R4031	2007-008588	R-CHIP

R4033,R4040,R4041	2007-008588	R-CHIP
R4042,R4043,R4044	2007-008588	R-CHIP
R4045,R4049,R4050	2007-008588	R-CHIP
R4051,R4052,R4053	2007-008588	R-CHIP
R4054,R4055,R4056	2007-008588	R-CHIP
R4057,R4058,R6017	2007-008588	R-CHIP
R1001	2007-008785	R-CHIP
R3001	2007-009111	R-CHIP
R5007	2007-009155	R-CHIP
R4020,R4021,R5052	2007-009157	R-CHIP
R7003	2007-009157	R-CHIP
R5021,R6009	2007-009212	R-CHIP
R6000	2007-009314	R-CHIP
R5010	2007-009315	R-CHIP
R4024,R4026,R4034	2007-009352	R-CHIP
R4036	2007-009352	R-CHIP
R1006	2007-009361	R-CHIP
R6010	2007-009408	R-CHIP
R6002,R6015	2007-009410	R-CHIP
R1000,R2001	2007-009805	R-CHIP
R6020	2007-009838	R-CHIP
R6011	2007-009969	R-CHIP
R6016	2007-010031	R-CHIP
R4000	2007-011043	R-CHIP
R4030,R4032,R4038	2007-011546	R-CHIP
R4039	2007-011546	R-CHIP
R6035	2007-011648	R-CHIP
C3054	2203-000386	C-CERAMIC,CHIP
C5094	2203-000812	C-CERAMIC,CHIP
C3024,C3058	2203-001153	C-CERAMIC,CHIP
C3053	2203-001239	C-CERAMIC,CHIP
C5071	2203-005344	C-CERAMIC,CHIP
C1000,C1051,C1096	2203-005682	C-CERAMIC,CHIP
C5125,C5126,C7035	2203-005682	C-CERAMIC,CHIP
C7057,C7104	2203-005682	C-CERAMIC,CHIP
C3016,C3019,C3020	2203-005725	C-CERAMIC,CHIP
C3037,C7003,C7007	2203-005725	C-CERAMIC,CHIP
L1031	2203-005725	C-CERAMIC,CHIP
C6027,C6047	2203-005726	C-CERAMIC,CHIP

C3030,C3052,C5096	2203-005729	C-CERAMIC,CHIP
C6000,C6004,C6010	2203-005729	C-CERAMIC,CHIP
C6016,L3003	2203-005729	C-CERAMIC,CHIP
C2100,C3025	2203-005731	C-CERAMIC,CHIP
C5108,C6008,C6009	2203-005732	C-CERAMIC,CHIP
C6037	2203-005732	C-CERAMIC,CHIP
C1005	2203-005734	C-CERAMIC,CHIP
C1003,C1004,C1024	2203-005736	C-CERAMIC,CHIP
C1044,C1045,C1076	2203-005736	C-CERAMIC,CHIP
C1097,C1098,C1099	2203-005736	C-CERAMIC,CHIP
C1102,C1107,C2000	2203-005736	C-CERAMIC,CHIP
C2001,C2003,C2004	2203-005736	C-CERAMIC,CHIP
C2005,C2008,C2010	2203-005736	C-CERAMIC,CHIP
C2011,C2018,C2039	2203-005736	C-CERAMIC,CHIP
C2040,C2072,C2101	2203-005736	C-CERAMIC,CHIP
C3008,C3040,C3050	2203-005736	C-CERAMIC,CHIP
C3087,L2012,L2021	2203-005736	C-CERAMIC,CHIP
C1064,L1066,L2004	2203-005777	C-CERAMIC,CHIP
C1049,C1050,C1053	2203-005789	C-CERAMIC,CHIP
C1110,L1029,L2001	2203-005789	C-CERAMIC,CHIP
L2008,L2011	2203-005789	C-CERAMIC,CHIP
C1046,C1047,L1005	2203-005792	C-CERAMIC,CHIP
C1040,C1067,C2013	2203-005806	C-CERAMIC,CHIP
C6012	2203-006121	C-CERAMIC,CHIP
C2088	2203-006123	C-CERAMIC,CHIP
L1026,L3009	2203-006187	C-CERAMIC,CHIP
C1095,C6061	2203-006194	C-CERAMIC,CHIP
C1075,L1014	2203-006318	C-CERAMIC,CHIP
C1002,C1022,C2050	2203-006400	C-CERAMIC,CHIP
C3021,C3048,C3059	2203-006400	C-CERAMIC,CHIP
C3078,C4011,C4012	2203-006400	C-CERAMIC,CHIP
C4024,C4025,C5075	2203-006400	C-CERAMIC,CHIP
C5080,C5101,C6030	2203-006400	C-CERAMIC,CHIP
C1074,C3023	2203-006410	C-CERAMIC,CHIP
C2036,C3018,C3029	2203-006423	C-CERAMIC,CHIP
C3034,C6013,C6019	2203-006423	C-CERAMIC,CHIP
C6021,C6022,C6051	2203-006423	C-CERAMIC,CHIP
C6089,C6091,C7029	2203-006423	C-CERAMIC,CHIP
C1036,C1037,C1056	2203-006556	C-CERAMIC,CHIP

C1061,C1069,C1112	2203-006556	C-CERAMIC,CHIP
C5107	2203-006556	C-CERAMIC,CHIP
C2098,C5115,C5135	2203-006562	C-CERAMIC,CHIP
C7080	2203-006562	C-CERAMIC,CHIP
L1060	2203-006604	C-CERAMIC,CHIP
C1015,L1028	2203-006665	C-CERAMIC,CHIP
C4003	2203-006668	C-CERAMIC,CHIP
C2014,C4007,C4010	2203-006839	C-CERAMIC,CHIP
C4034,C5076,C5077	2203-006839	C-CERAMIC,CHIP
C5078,C6045	2203-006839	C-CERAMIC,CHIP
C2095,C5006,C5013	2203-006872	C-CERAMIC,CHIP
C5026,C5027,C5028	2203-006872	C-CERAMIC,CHIP
C5029,C5032,C5043	2203-006872	C-CERAMIC,CHIP
C5048,C5090	2203-006872	C-CERAMIC,CHIP
C2020,C2024,C2026	2203-006979	C-CERAMIC,CHIP
C2028,C2030,C2032	2203-006979	C-CERAMIC,CHIP
C2034,C2037,C2053	2203-006979	C-CERAMIC,CHIP
C1114,C7105,L2065	2203-007194	C-CERAMIC,CHIP
C4023,C4096,C5136	2203-007210	C-CERAMIC,CHIP
C5137	2203-007210	C-CERAMIC,CHIP
C1038,C1058,C5023	2203-007271	C-CERAMIC,CHIP
C5024,C5046,C5069	2203-007271	C-CERAMIC,CHIP
C5130,C7027	2203-007271	C-CERAMIC,CHIP
C3015,C3062,C5008	2203-007317	C-CERAMIC,CHIP
C5036,C5040,C5041	2203-007317	C-CERAMIC,CHIP
C5042,C5065,C5073	2203-007317	C-CERAMIC,CHIP
C5088,C5100,C6018	2203-007317	C-CERAMIC,CHIP
C7002,C7010,C7023	2203-007317	C-CERAMIC,CHIP
C7024,C7028,C7034	2203-007317	C-CERAMIC,CHIP
C2035,C7040	2203-007391	C-CERAMIC,CHIP
C2017,C2042,C2097	2203-007393	C-CERAMIC,CHIP
C3035,C3036,C4029	2203-007393	C-CERAMIC,CHIP
C4044,C4051,C4059	2203-007393	C-CERAMIC,CHIP
C4067,C4074,C5079	2203-007393	C-CERAMIC,CHIP
C5081,C5093,C5097	2203-007393	C-CERAMIC,CHIP
C6025,C6039,C6082	2203-007393	C-CERAMIC,CHIP
C6083,C6084,C6085	2203-007393	C-CERAMIC,CHIP
C6086,C6087,C6092	2203-007393	C-CERAMIC,CHIP
C7025	2203-007393	C-CERAMIC,CHIP

C5095	2203-007425	C-CERAMIC,CHIP
C5106	2203-007456	C-CERAMIC,CHIP
C3033	2203-007544	C-CERAMIC,CHIP
C4084,C5001,C5054	2203-007781	C-CERAMIC,CHIP
C5058,C5060,C5062	2203-007781	C-CERAMIC,CHIP
C5064,C5067	2203-007781	C-CERAMIC,CHIP
C2021,C2025,C2027	2203-007796	C-CERAMIC,CHIP
C2031,C3002,C3004	2203-007796	C-CERAMIC,CHIP
C3017,C3026,C3032	2203-007796	C-CERAMIC,CHIP
C3038,C3057,C3060	2203-007796	C-CERAMIC,CHIP
C3081,C3082,C4002	2203-007796	C-CERAMIC,CHIP
C4004,C4006,C4008	2203-007796	C-CERAMIC,CHIP
C4013,C4014,C4017	2203-007796	C-CERAMIC,CHIP
C4019,C4020,C4021	2203-007796	C-CERAMIC,CHIP
C4022,C4026,C4027	2203-007796	C-CERAMIC,CHIP
C4030,C4031,C4032	2203-007796	C-CERAMIC,CHIP
C4036,C4040,C4041	2203-007796	C-CERAMIC,CHIP
C4042,C4043,C4045	2203-007796	C-CERAMIC,CHIP
C4047,C4048,C4049	2203-007796	C-CERAMIC,CHIP
C4050,C4053,C4054	2203-007796	C-CERAMIC,CHIP
C4055,C4056,C4057	2203-007796	C-CERAMIC,CHIP
C4058,C4060,C4061	2203-007796	C-CERAMIC,CHIP
C4062,C4064,C4065	2203-007796	C-CERAMIC,CHIP
C4066,C4069,C4070	2203-007796	C-CERAMIC,CHIP
C4071,C4073,C4079	2203-007796	C-CERAMIC,CHIP
C4080,C4083,C4085	2203-007796	C-CERAMIC,CHIP
C4086,C4090,C4091	2203-007796	C-CERAMIC,CHIP
C4093,C4094,C4095	2203-007796	C-CERAMIC,CHIP
C4097,C4099,C4100	2203-007796	C-CERAMIC,CHIP
C4101,C4102,C5014	2203-007796	C-CERAMIC,CHIP
C5015,C5022,C5031	2203-007796	C-CERAMIC,CHIP
C5047,C5049,C5082	2203-007796	C-CERAMIC,CHIP
C5104,C5109,C5110	2203-007796	C-CERAMIC,CHIP
C5116,C5128,C6001	2203-007796	C-CERAMIC,CHIP
C6020,C6040,C6041	2203-007796	C-CERAMIC,CHIP
C6042,C6043,C7001	2203-007796	C-CERAMIC,CHIP
C7004,C7005,C7006	2203-007796	C-CERAMIC,CHIP
C7008,C7009,C7018	2203-007796	C-CERAMIC,CHIP
C7021,C7022,C7048	2203-007796	C-CERAMIC,CHIP

C7049,C7076,C7077	2203-007796	C-CERAMIC,CHIP
C7082	2203-007796	C-CERAMIC,CHIP
C1021,C1028,C1057	2203-008097	C-CERAMIC,CHIP
C1062,C1106,C5017	2203-008097	C-CERAMIC,CHIP
C5034,C5087	2203-008097	C-CERAMIC,CHIP
C3000,C3001,C3005	2203-008242	C-CERAMIC,CHIP
C3006,C3007,C3009	2203-008242	C-CERAMIC,CHIP
C4000,C4038,C4039	2203-008242	C-CERAMIC,CHIP
C4072,C4078,C5050	2203-008242	C-CERAMIC,CHIP
C5113,C5139	2203-008242	C-CERAMIC,CHIP
C6029	2203-008243	C-CERAMIC,CHIP
C5003,C5004,C5052	2203-008312	C-CERAMIC,CHIP
C5056	2203-008312	C-CERAMIC,CHIP
C2048,C2049,C2051	2203-008403	C-CERAMIC,CHIP
C2052	2203-008403	C-CERAMIC,CHIP
C5114	2203-008572	C-CERAMIC,CHIP
C5105	2203-008654	C-CERAMIC,CHIP
C1068,C3012,C3042	2203-008860	C-CERAMIC,CHIP
C3055,C3080,C3095	2203-008860	C-CERAMIC,CHIP
C5012,C5033,C5099	2203-008860	C-CERAMIC,CHIP
C5127,C6002,C6035	2203-008860	C-CERAMIC,CHIP
C6081,C7016,C7050	2203-008860	C-CERAMIC,CHIP
C7051,C7052,C7078	2203-008860	C-CERAMIC,CHIP
C7079	2203-008860	C-CERAMIC,CHIP
C1039,C4001,C4016	2203-008876	C-CERAMIC,CHIP
C4063,C5019,C5025	2203-008876	C-CERAMIC,CHIP
C5030,C5035,C5092	2203-008876	C-CERAMIC,CHIP
C5103,C5111,C5138	2203-008876	C-CERAMIC,CHIP
C6052,C7081	2203-008876	C-CERAMIC,CHIP
C4077,C4087,C4088	2203-009064	C-CERAMIC,CHIP
C3013,C3014	2203-009167	C-CERAMIC,CHIP
C2023,C5009	2203-009537	C-CERAMIC,CHIP
C6005,C6006,C7053	2203-009618	C-CERAMIC,CHIP
C1063,C2022,C2029	2203-009733	C-CERAMIC,CHIP
C2033,C2038,C4037	2203-009733	C-CERAMIC,CHIP
C4046,C4052,C4068	2203-009733	C-CERAMIC,CHIP
C4081,C4082,C4092	2203-009733	C-CERAMIC,CHIP
C5000,C5002,C5005	2203-009733	C-CERAMIC,CHIP
C5051,C5053,C5055	2203-009733	C-CERAMIC,CHIP

C5057,C5059,C5061	2203-009733	C-CERAMIC,CHIP
C5063,C5066,C5068	2203-009733	C-CERAMIC,CHIP
C5070,C5072,C5074	2203-009733	C-CERAMIC,CHIP
C5084,C5085,C5089	2203-009733	C-CERAMIC,CHIP
C5129,C5141,C5144	2203-009733	C-CERAMIC,CHIP
C6003,C6015,C6046	2203-009733	C-CERAMIC,CHIP
C6088,C6090,C7000	2203-009733	C-CERAMIC,CHIP
C7012,C7013,C7014	2203-009733	C-CERAMIC,CHIP
C7015,C7019,C7020	2203-009733	C-CERAMIC,CHIP
C7032,C7036,C7037	2203-009733	C-CERAMIC,CHIP
C7038,C7039,C7042	2203-009733	C-CERAMIC,CHIP
C7058,C7068,C7069	2203-009733	C-CERAMIC,CHIP
C7070,C7071,C7072	2203-009733	C-CERAMIC,CHIP
C7075,C7086,C7089	2203-009733	C-CERAMIC,CHIP
C7090,C7106	2203-009733	C-CERAMIC,CHIP
C4075,C4076	2203-009735	C-CERAMIC,CHIP
C5091	2203-009736	C-CERAMIC,CHIP
C3039,C3046	2203-009858	C-CERAMIC,CHIP
C5142,C5143	2203-010066	C-CERAMIC,CHIP
L5011,L5014	2703-002309	INDUCTOR-SMD
L1056,L2066	2703-002649	INDUCTOR-SMD
C1043,L1050,L2003	2703-002901	INDUCTOR-SMD
C3077,L3005	2703-002903	INDUCTOR-SMD
L2030	2703-002907	INDUCTOR-SMD
C1018,C2006	2703-002955	INDUCTOR-SMD
L1052	2703-002958	INDUCTOR-SMD
L2048,L3008	2703-002999	INDUCTOR-SMD
C2015	2703-003004	INDUCTOR-SMD
L3006	2703-003476	INDUCTOR-SMD
L1045,L1073,L2013	2703-004012	INDUCTOR-SMD
C3027,L1011,L1032	2703-004013	INDUCTOR-SMD
L1038,L2027	2703-004013	INDUCTOR-SMD
C1066,L1036,L2005	2703-004014	INDUCTOR-SMD
L3017	2703-004014	INDUCTOR-SMD
L1081,L3001,L3018	2703-004018	INDUCTOR-SMD
C1014,C1085,C2091	2703-004032	INDUCTOR-SMD
L1000,L2029	2703-004032	INDUCTOR-SMD
L1082,L2007	2703-004033	INDUCTOR-SMD
L1041,L1047,L3034	2703-004034	INDUCTOR-SMD

L2037	2703-004036	INDUCTOR-SMD
L2034	2703-004037	INDUCTOR-SMD
L1006,L3013	2703-004038	INDUCTOR-SMD
C1035,C2044,L1027	2703-004286	INDUCTOR-SMD
L1033,L1040,L1043	2703-004286	INDUCTOR-SMD
L2010,L3002	2703-004286	INDUCTOR-SMD
L2036,L2040	2703-004287	INDUCTOR-SMD
L2031	2703-004288	INDUCTOR-SMD
C1008,C1109,L1007	2703-004289	INDUCTOR-SMD
L1009,L1044	2703-004289	INDUCTOR-SMD
L1002	2703-004299	INDUCTOR-SMD
L2002	2703-004302	INDUCTOR-SMD
C1006,L2016	2703-004317	INDUCTOR-SMD
C1108,L1034,L1035	2703-004328	INDUCTOR-SMD
L1018,L1023	2703-004362	INDUCTOR-SMD
C3031	2703-004363	INDUCTOR-SMD
C1017,C1065,C1070	2703-004366	INDUCTOR-SMD
L2006,L3014	2703-004703	INDUCTOR-SMD
L1016,L1022,L1030	2703-004764	INDUCTOR-SMD
L3007	2703-004764	INDUCTOR-SMD
L1004	2703-004853	INDUCTOR-SMD
L1069,L3016	2703-004862	INDUCTOR-SMD
C1012,L3026	2703-004911	INDUCTOR-SMD
L2020,L5020	2703-004947	INDUCTOR-SMD
C1032,C1033,L1003	2703-005058	INDUCTOR-SMD
L1053	2703-005058	INDUCTOR-SMD
L7009	2703-005061	INDUCTOR-SMD
L5000,L5007,L5008	2703-005067	INDUCTOR-SMD
L5009,L5010	2703-005067	INDUCTOR-SMD
L5012	2703-005136	INDUCTOR-SMD
L5001,L5004,L5005	2703-005201	INDUCTOR-SMD
L5006	2703-005201	INDUCTOR-SMD
L5002	2703-005226	INDUCTOR-SMD
C3028	2703-005295	INDUCTOR-SMD
L7005	2703-005418	INDUCTOR-SMD
L7006	2703-005419	INDUCTOR-SMD
L6000	2703-005505	INDUCTOR-SMD
L5003	2703-005509	INDUCTOR-SMD
L3011,L3028	2703-005555	INDUCTOR-SMD

OSC5000	2801-005393	CRYSTAL-UNIT
OSC2000	2805-001113	OSCILLATOR
F1009	2904-002241	FILTER-SAW
F2001	2904-002257	FILTER-SAW
F1000	2904-002260	FILTER-SAW
F1003	2904-002285	FILTER-SAW
F2004	2904-002349	FILTER-SAW
F3001,F3002	2904-002355	FILTER-SAW
F3000	2904-002381	FILTER-SAW
F1001	2904-002397	FILTER-SAW
F1002	2910-000390	FILTER
U2012	2911-000435	FILTER
U1002	2911-000461	FILTER
MIC6000	3003-001237	MIC-CONDENSOR
L1025	3301-001895	CORE-FERRITE BEAD
L2053,L2054	3301-002122	CORE-FERRITE BEAD
L7000,L7001,L7002	3301-002223	CORE-FERRITE BEAD
L7003,L7010	3301-002223	CORE-FERRITE BEAD
L6013	3301-002228	CORE-FERRITE BEAD
L6002,L6005,L6007	3301-002235	CORE-FERRITE BEAD
L6011,L6012,L6014	3301-002235	CORE-FERRITE BEAD
L6015	3301-002235	CORE-FERRITE BEAD
L2000	3301-002236	CORE-FERRITE BEAD
L2049	3301-002237	CORE-FERRITE BEAD
C3003,L2015,L2017	3301-002238	CORE-FERRITE BEAD
L2022,L2023,L2028	3301-002238	CORE-FERRITE BEAD
L3012,L3015,L5015	3301-002238	CORE-FERRITE BEAD
L5016,L6001,L6003	3301-002238	CORE-FERRITE BEAD
L2038	3301-002242	CORE-FERRITE BEAD
L6004,L6006	3301-002243	CORE-FERRITE BEAD
L2009,L2014,L2024	3301-002312	CORE-FERRITE BEAD
L2026,L7004,L7007	3301-002312	CORE-FERRITE BEAD
L7008	3301-002312	CORE-FERRITE BEAD
L5013	3301-002331	CORE-FERRITE BEAD
RFS1000	3705-001937	CONNECTOR-COAXIAL
SIM604UP	3709-001932	CONNECTOR-CARD EDGE
SIM603	3709-001933	CONNECTOR-CARD EDGE
SIM601,SIM602	3709-001934	CONNECTOR-CARD EDGE
SOC7004	3710-003193	CONNECTOR-SOCKET

5. MAIN Electrical Parts List

HDC7002	3710-003871	CONNECTOR-SOCKET
HDC7001	3710-003874	CONNECTOR-SOCKET
SOC5001,SOC5002	3710-004008	CONNECTOR-SOCKET
HDC7000	3710-004027	CONNECTOR-SOCKET
SOC5000	3710-004109	CONNECTOR-SOCKET
HEA6000	3710-004344	CONNECTOR-SOCKET
HEA7003	3711-008931	CONNECTOR-HEADER
ANT2013,ANT2015	3712-001621	CONNECTOR
ANT6000,ANT6001	3712-001621	CONNECTOR
ANT2000,ANT2002	3712-001626	CONNECTOR
ANT3001,ANT3002	3712-001626	CONNECTOR
ANT3003	3712-001626	CONNECTOR
ANT5000,ANT5001	3712-001633	CONNECTOR
F3004	4709-002284	RF-MODULE
F3003	4709-002351	RF-MODULE
F1006	4709-002412	RF-MODULE
CLIP1000	GH60-00010A	CONNECTOR
GA7000	GH62-00042A	GASCKET
SC6005	GH63-16791A	SHIELDCAN
SC6000	GH63-16834A	SHIELDCAN
SC6001	GH63-16835A	SHIELDCAN
SC6002	GH63-16836A	SHIELDCAN
SC6004	GH63-17765A	SHIELDCAN
SC6006	GH63-17766A	SHIELDCAN
SC6003	GH63-17817A	SHIELDCAN
SC6004SP	GH02-19593A	TAPE ABSORBER-SHIELDCAN NANOTIM
SC6006SP	GH02-19595A	TAPE CONDUCTIVE-SHIELD CAN PMIC

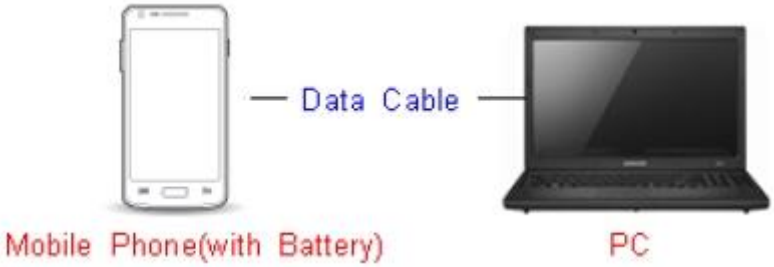
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

6-1. S/W Update

6-1-1. Preparation

- S/W Update program : **Fenrir 5.17.xxxx**
- Mobile Phone
- Data Cable

※ Settings



Data Cable : GH39-02003A

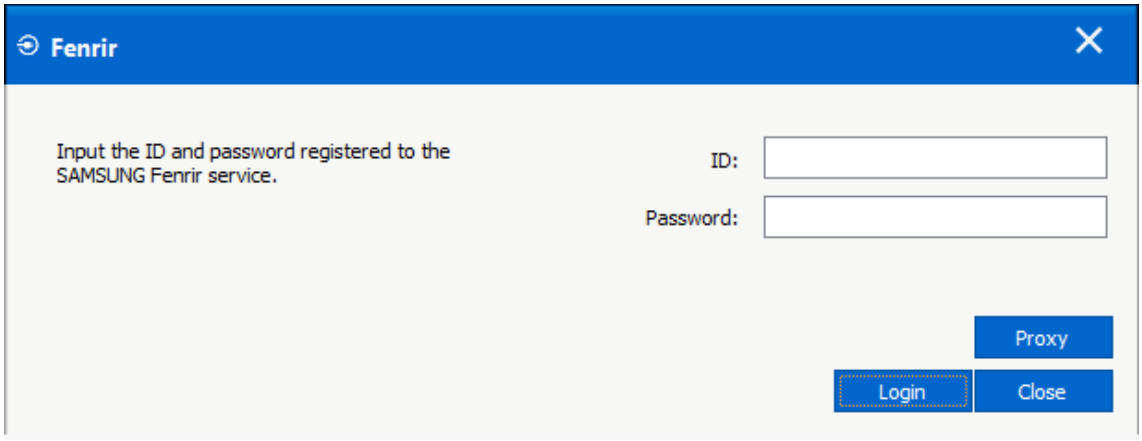
6-1-2. How to use ‘Fenrir’ S/W update program.

1) Launch Fenrir by clicking on the icon on the desktop

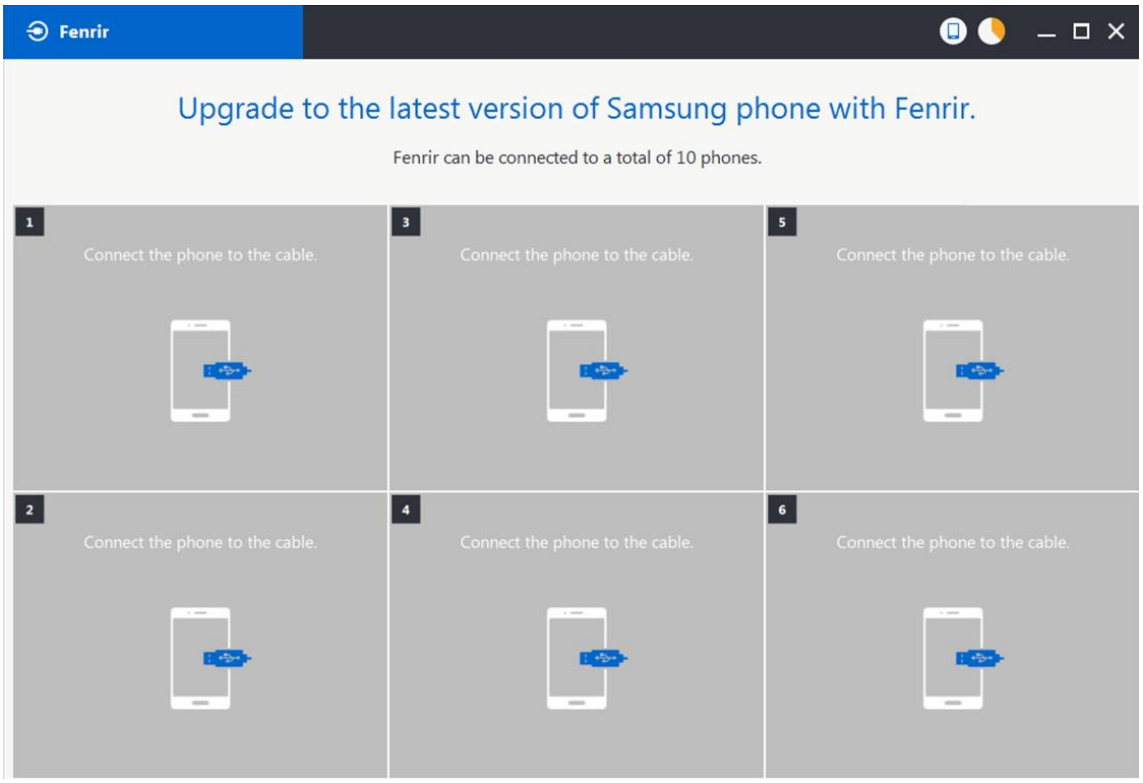
- SVH (Fenrir_Home) : It uses Home binary which does not have user data area in the memory when flashed to a device. (Keep user data)

- SVC (Fenrir_Factory) : It uses Factory binary which erases all user data in the memory when flashed to a device. (Clear user data)
- SVA (Fenrir_All) : It uses Factory and Home binaries. you can download Home and Factory binary in a PC(but requires double HDD storage and NW traffic)

2) Input ID & password
※You need to reset the ID information in case of PC change and format and repair, hard disk change

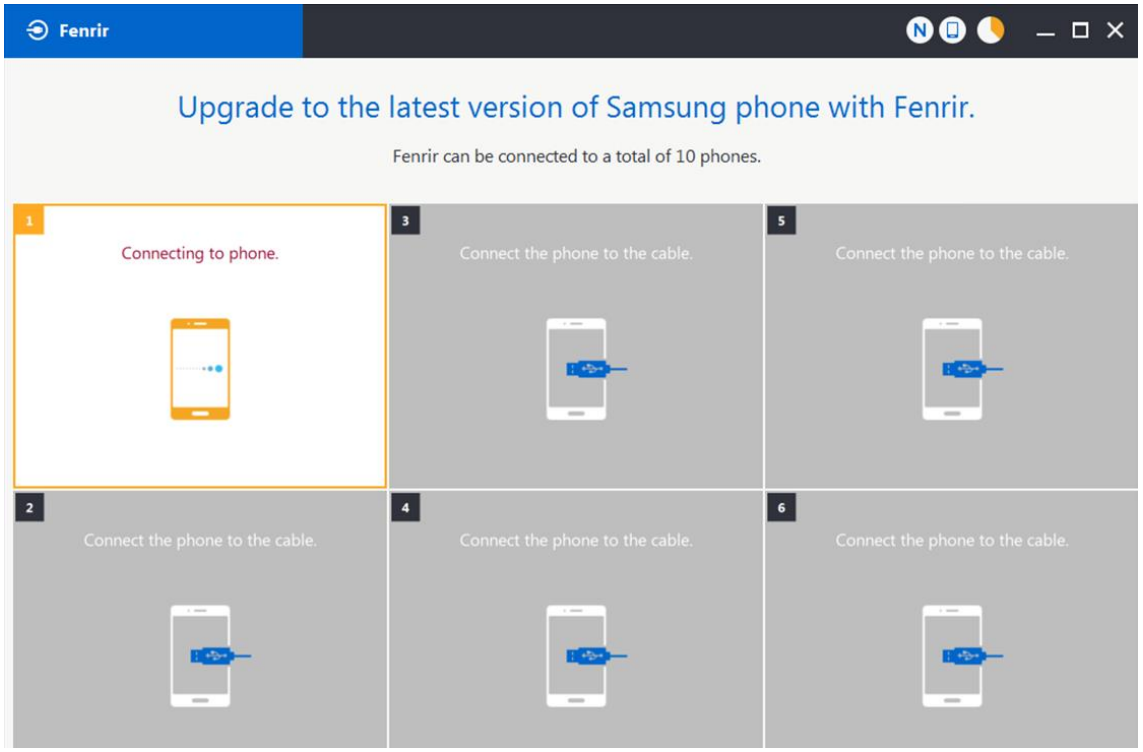


3) Ensure device has sufficient charge (at least 20%) to start firmware update.



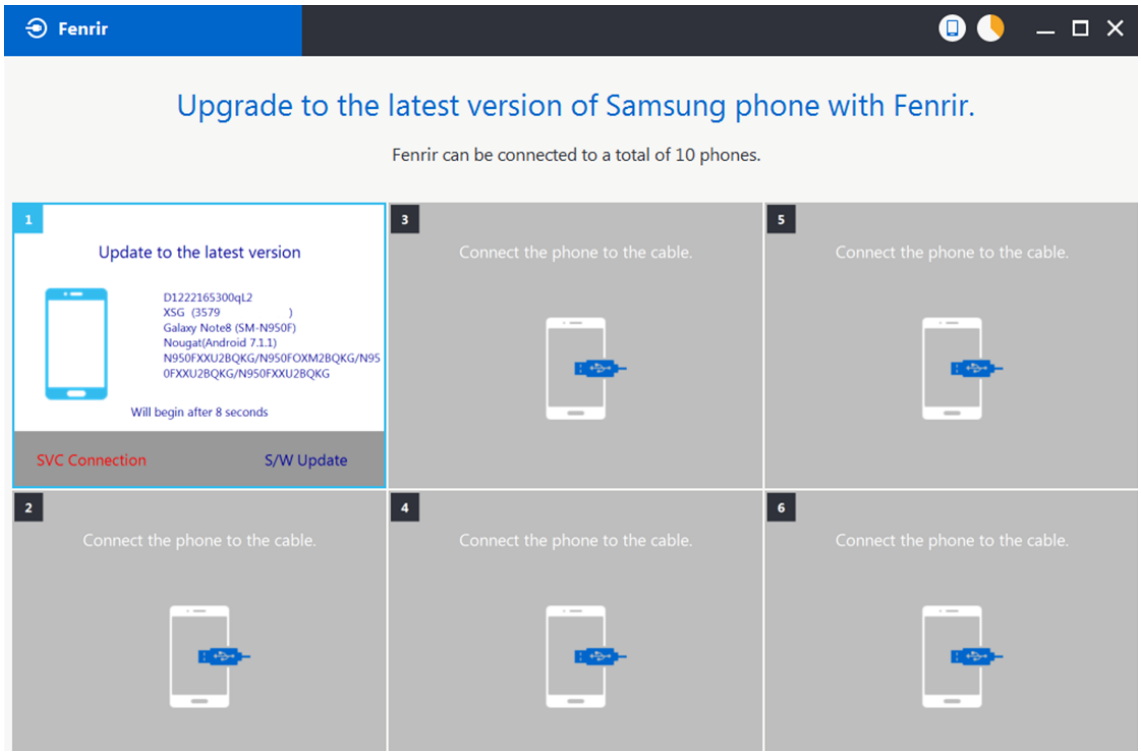
4) Connect the device to PC via data cable.

5) Upon USB connection, you will be presented with below screen.

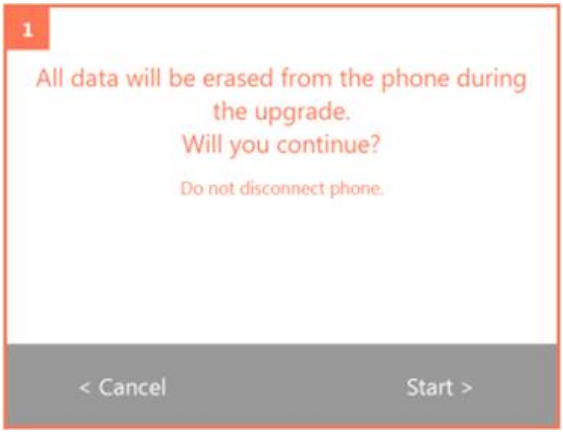


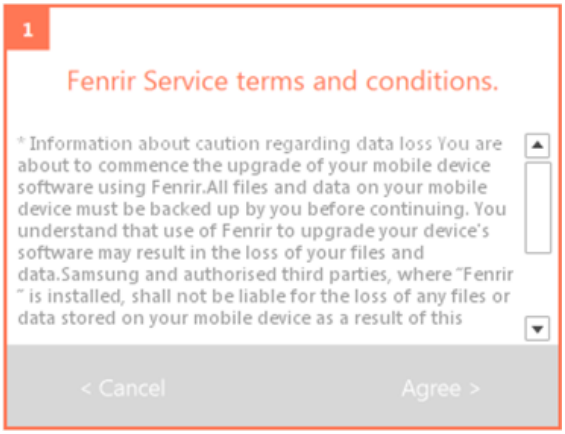
6. Level 1 Repair

6) Once device is detected, you will be presented with below screen. To update S/W, select “S/W Update” or to exit select “SVC Connection”. If you select “SVC Connection”, only Fenrir connection history (record) will be stored in the FUS server to support warranty validation. (This is known as “Service Connection” history)

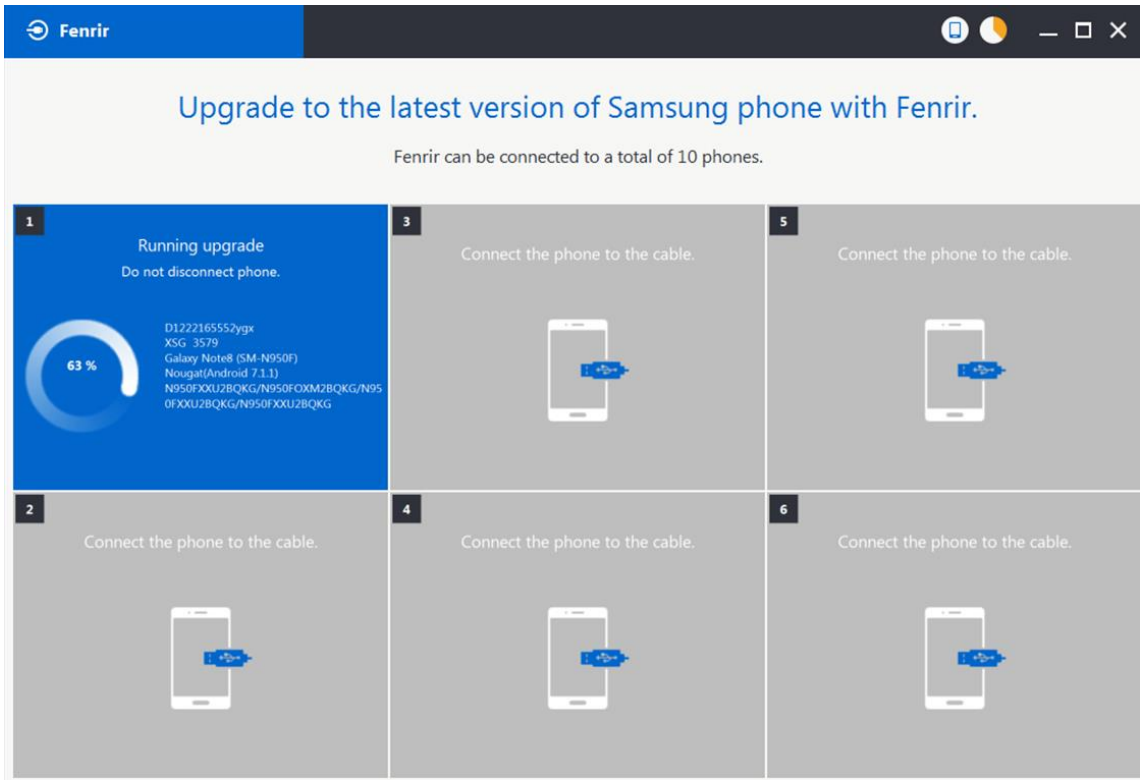


7) Once Fenrir starts, application will display the below screen. And select the Start button & Agree button.

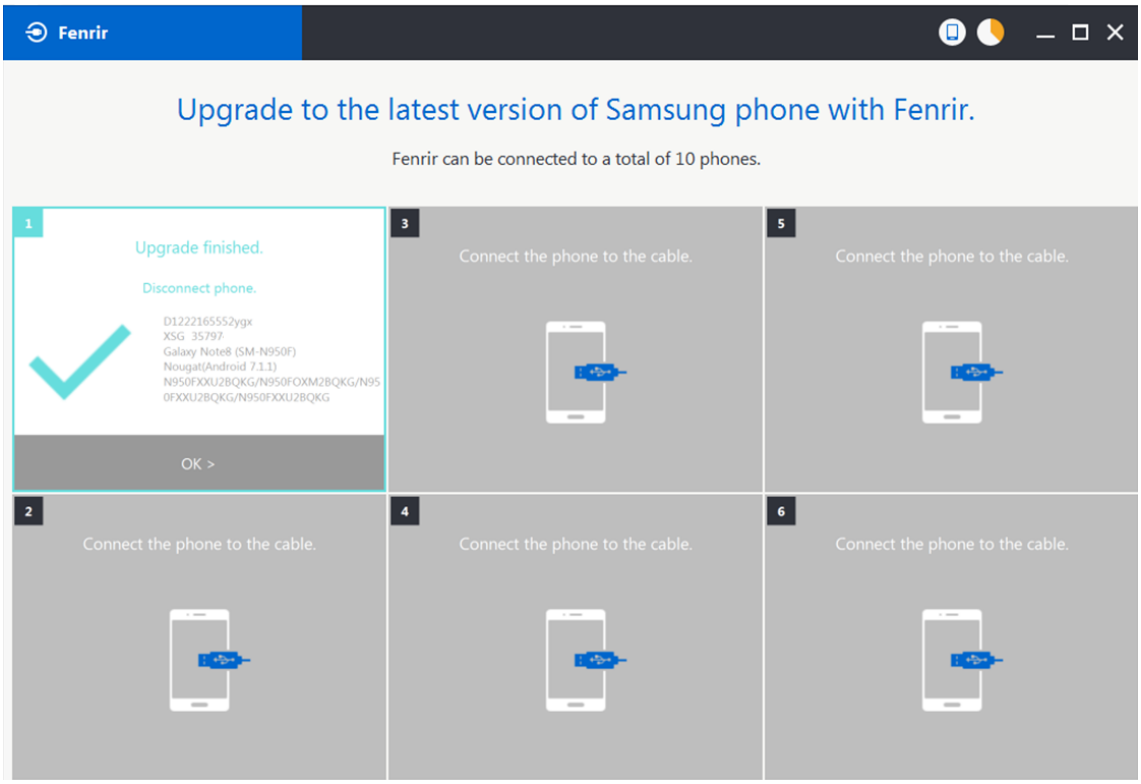




8) The status circle increases as the update installs. The update process takes approximately 5-10 minutes to complete. Do not disconnect the device from USB during processing.



9) Once complete, application will present the below screen indicating update complete.
Click Ok and detach device from USB.



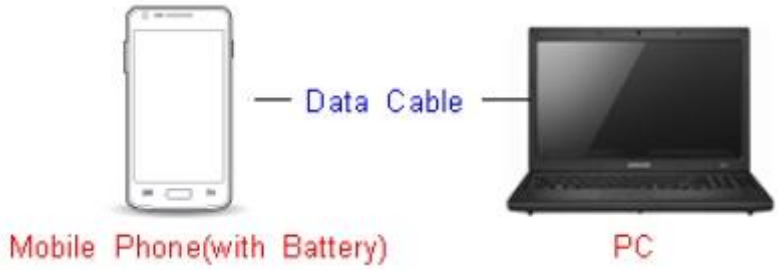
6-2. How to use ‘Odin’ program

※ S/W Update via Fenrir is mandatory.
Below is the method to use ‘Odin’ program in any specific case.

6-2-1. Preparation

- Installation program : **Odin3 v3.13.2.exe or above**
- Mobile Phone
- Data Cable
- S/W Binary files (downloaded from GSPN)

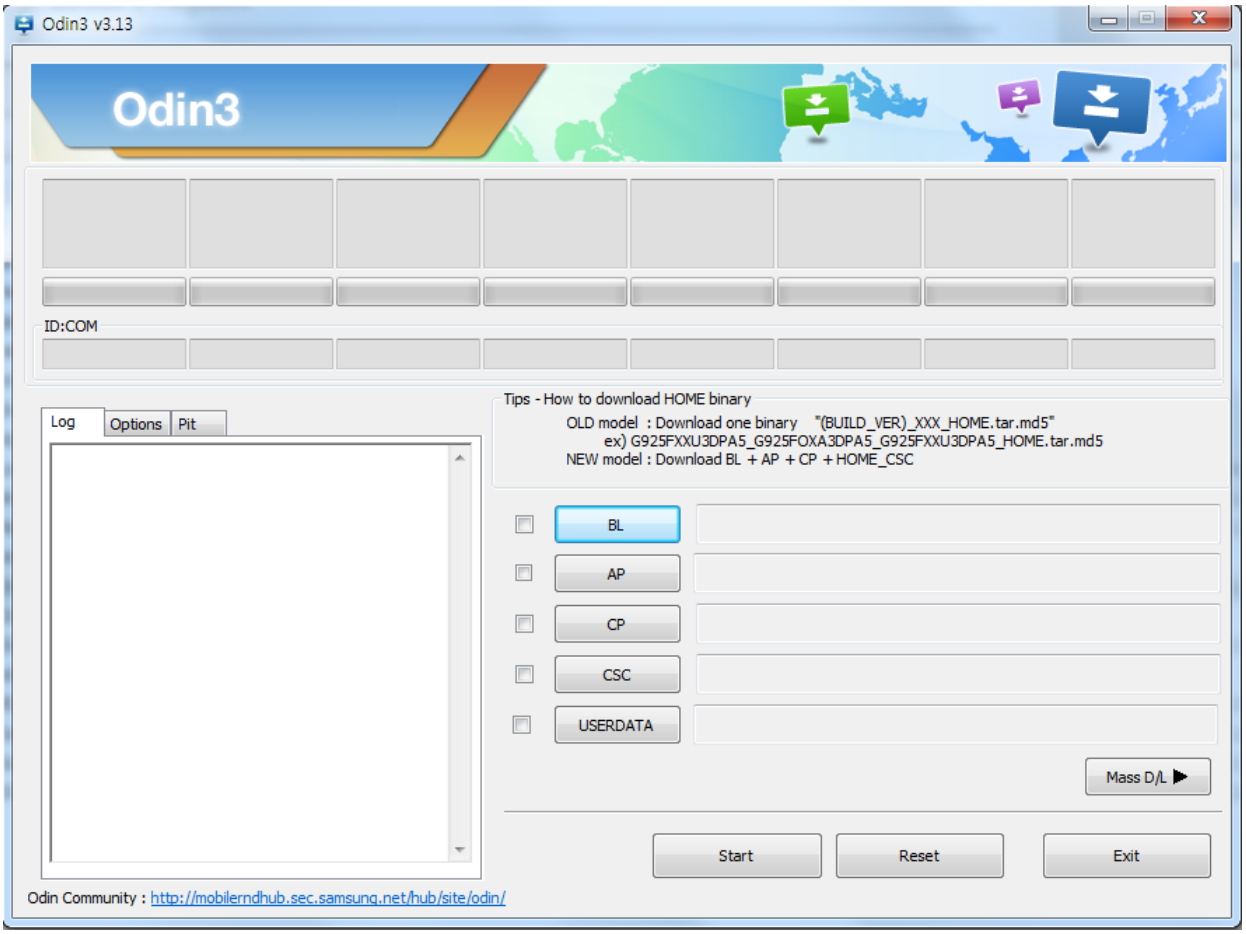
※ Settings



Data Cable : GH39-02003A

6-2-2. S/W Installation Program (Downloader program)

Open up the S/W Installation Program by executing the **"Odin3 v3.13.2.exe"**



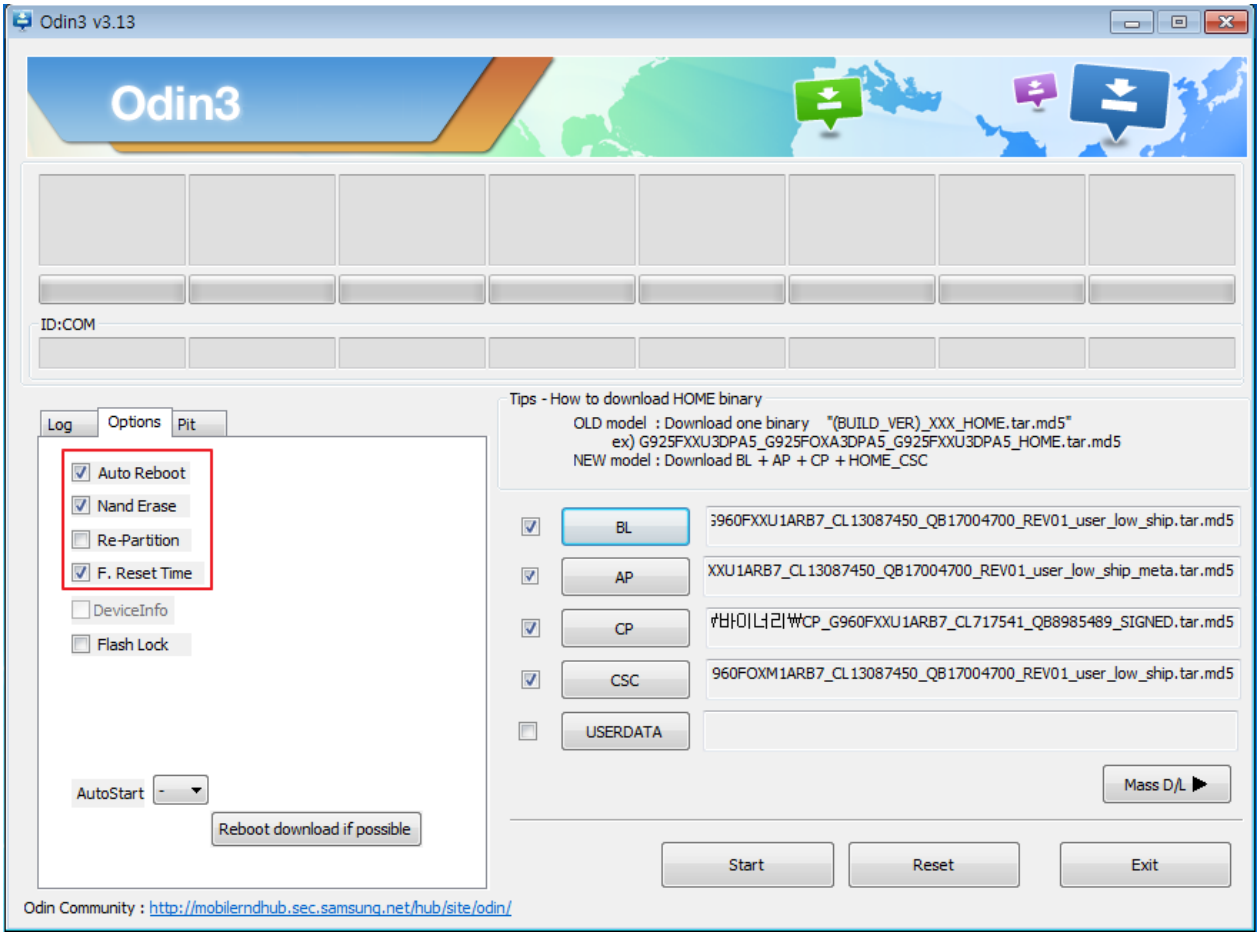
6. Level 1 Repair

1. Enable the check mark by click on the following options

- Check Auto Reboot, F. Reset Time, Nand Erase

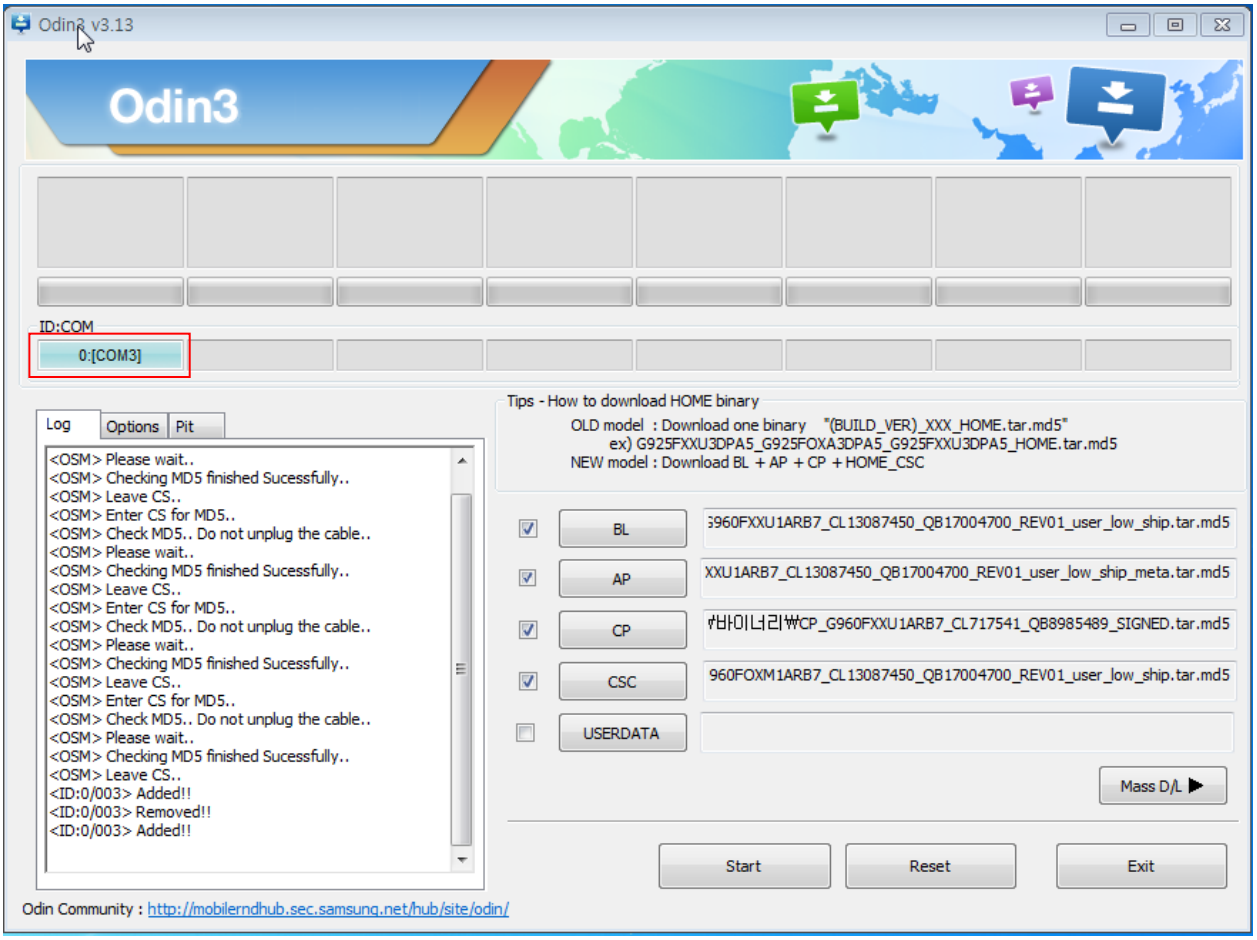
- Check BL, AP, CP, CSC Files

* Note : "Odin v3.13.2 or above" checks MD5 checksum just after file selection.



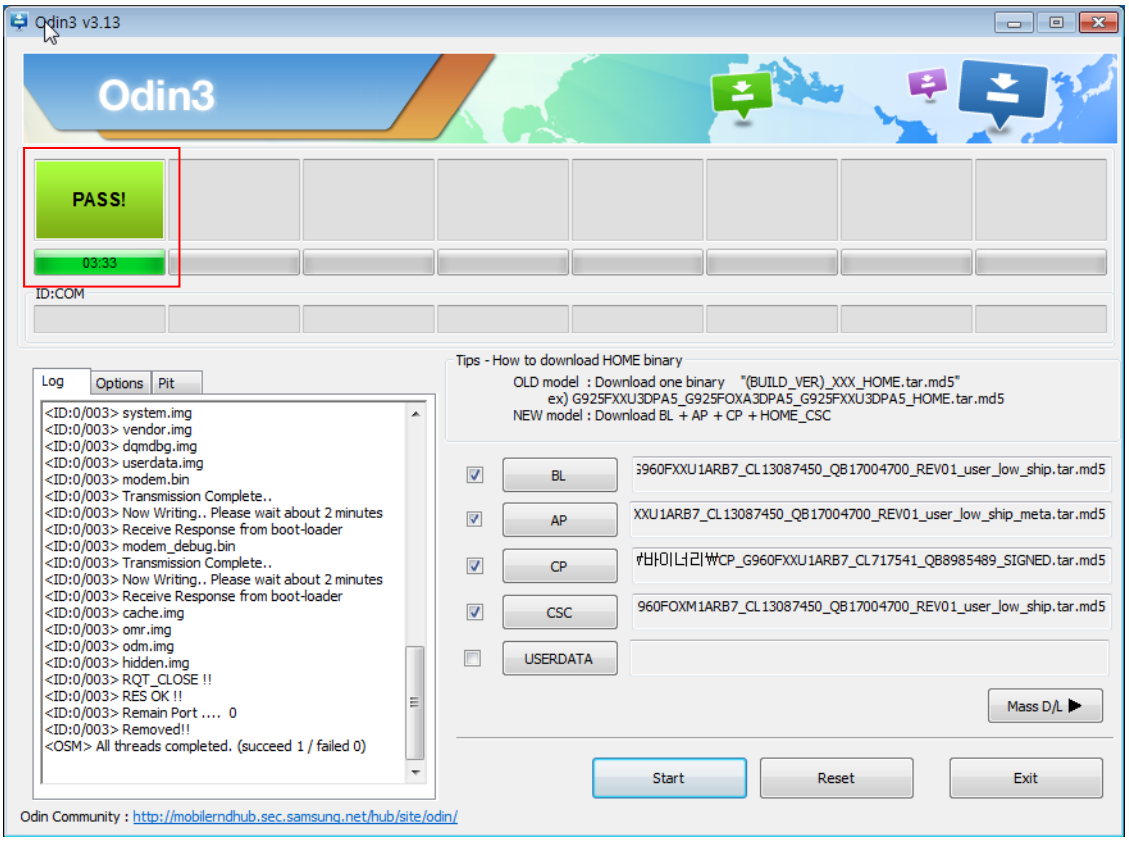
2. Enter into Download Mode
- To enter into Download Mode, insert USB cable into Smart phone and connect to computer
  And press Volume Down + UP button simultaneously followed by pressing Volume up button as a direction of the phone.

3. Connect the device to PC via Data Cable.
Make sure that the one of communication ports [ID:COM] box is highlighted in sky blue.
The device is now connected with the PC and ready to download the binary files in it.



6. Level 1 Repair

4. Start downloading the binary files into the device by clicking Start button on the screen.
The green colored "PASS!" sign will appear on the upper-left box if the binary files have been successfully downloaded into the device.



5. Disconnect the device from the Data cable.

6. Once the device boots up, you can check the version of the binary file or name by pressing the following code in sequence; ***#1234#**

You can perform Factory data Reset by Settings → General Management → Reset

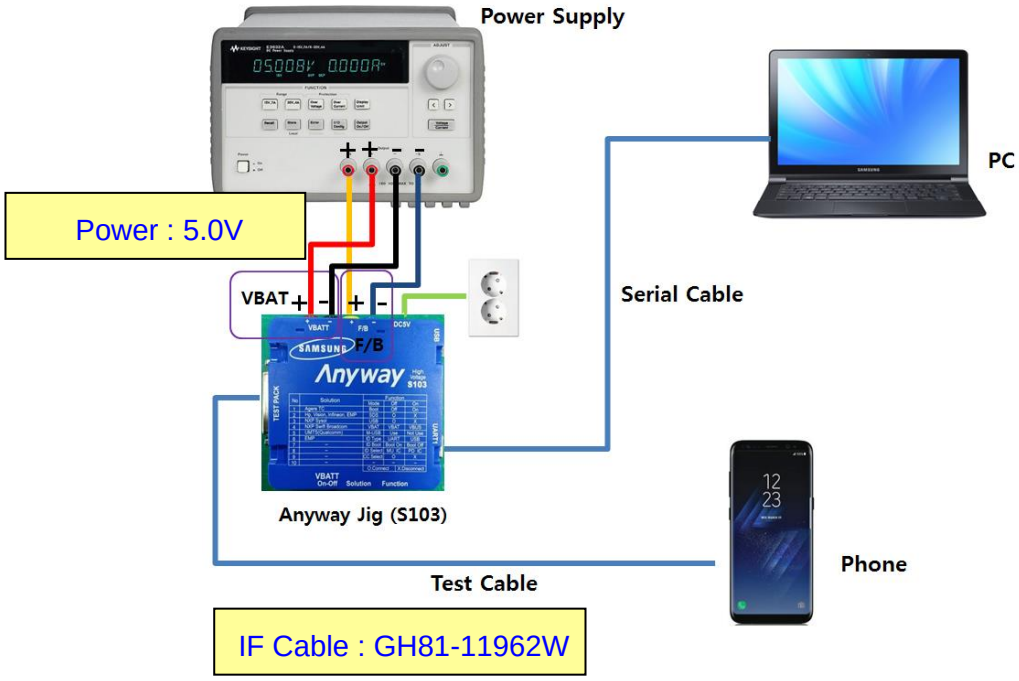
※ Caution. Never disconnect during the S/W downloading.

6-3. IMEI writing

6-3-1. Preparation

- New IMEI writing Program has been released.
- Supported Model : Models which CAB files are uploaded on HHPsvc INI File category, instead of ini file.
- Refer to below IMEI writing procedure.

- H/W

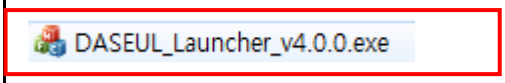


- S/W

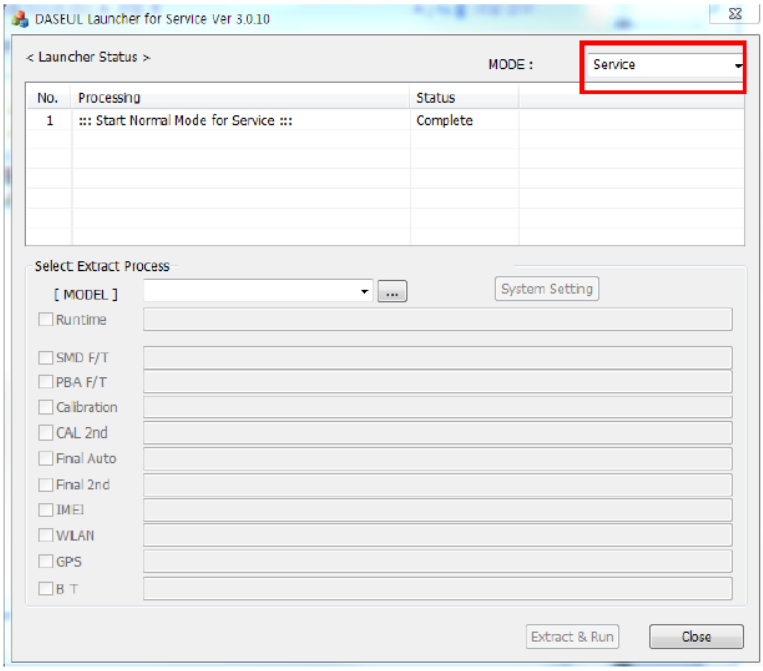
① Library Install	To use Daseul, library files should be installed. Refer to SVC Bulletin “(11-82) Daseul (New IMEI writing Program) Library Install guide_rev1.0”
②Launcher	**DASEUL_Launcher_v4.0.0** or higher -Uploaded on HHPsvc Notice
③ Runtime File	1. **DASEUL_IMEI_ALL_Runtime_3.1.386.0_r00573.CAB** or higher -Uploaded on HHPsvc Notice 2. Make ‘ModelName’ folder at the same position with launcher & Runtime file. DASEUL_IMEI_ALL_Runtime_3.1.386.0_r00573.CAB DASEUL_Launcher_v4.0.0.exe SM-A920F_128DS(CSC)_IMEI_Ver_3.1.385.1.CAB
④Model File	Copy Model File under the ‘SM-G8870’ folder

6-3-2. IMEI writing Process

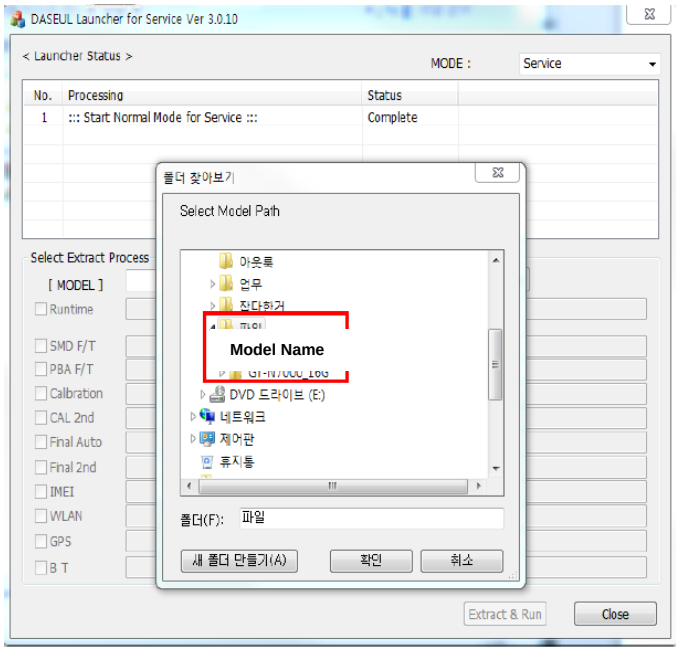
1. Run **DASEUL_Launcher_v4.0.0**



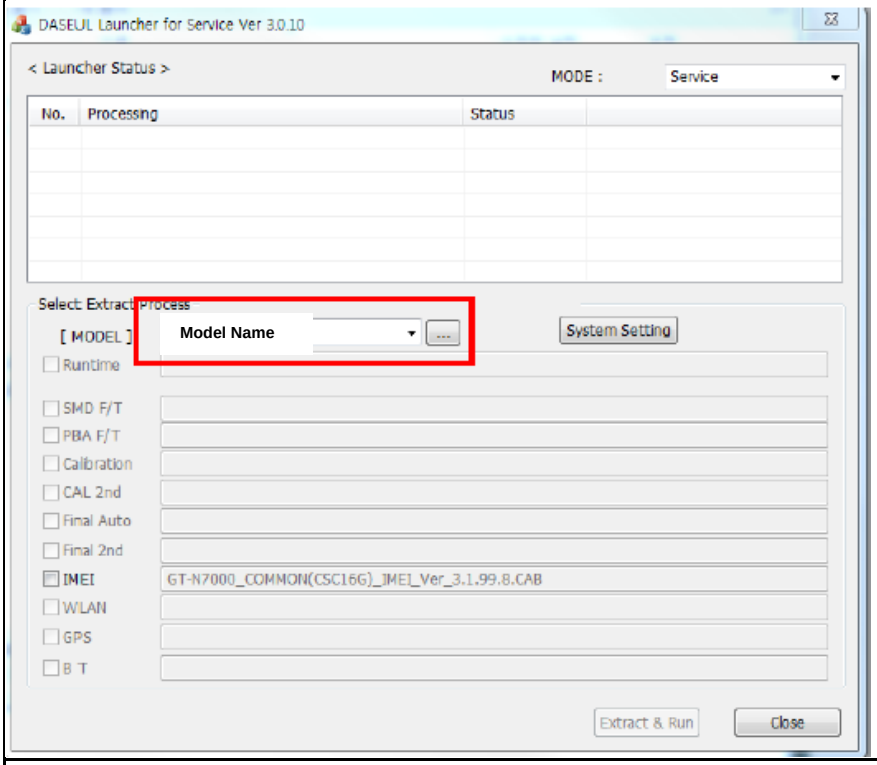
2. Select Service Mode



3. Click ... and Select folder where the Launcher exists

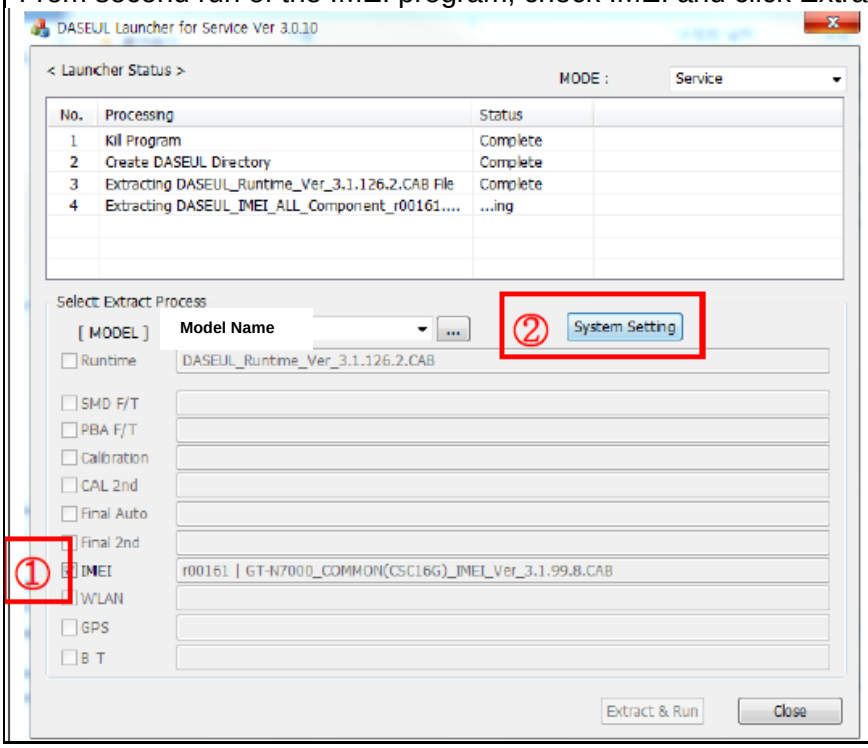


4. Select Model



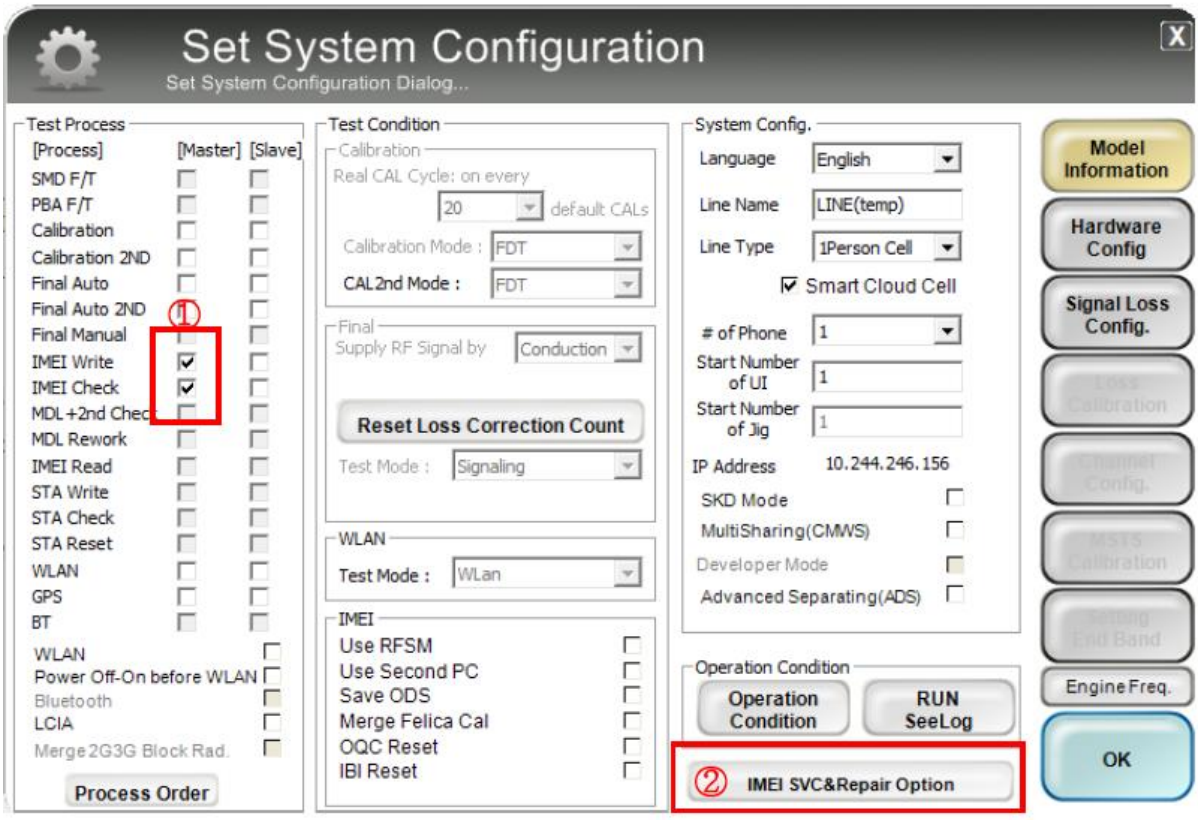
5. Check IMEI and click System Setting

※Once you setup the setting, you don t have to do it again, unless there is change.
From second run of the IMEI program, check IMEI and click Extract & Run.

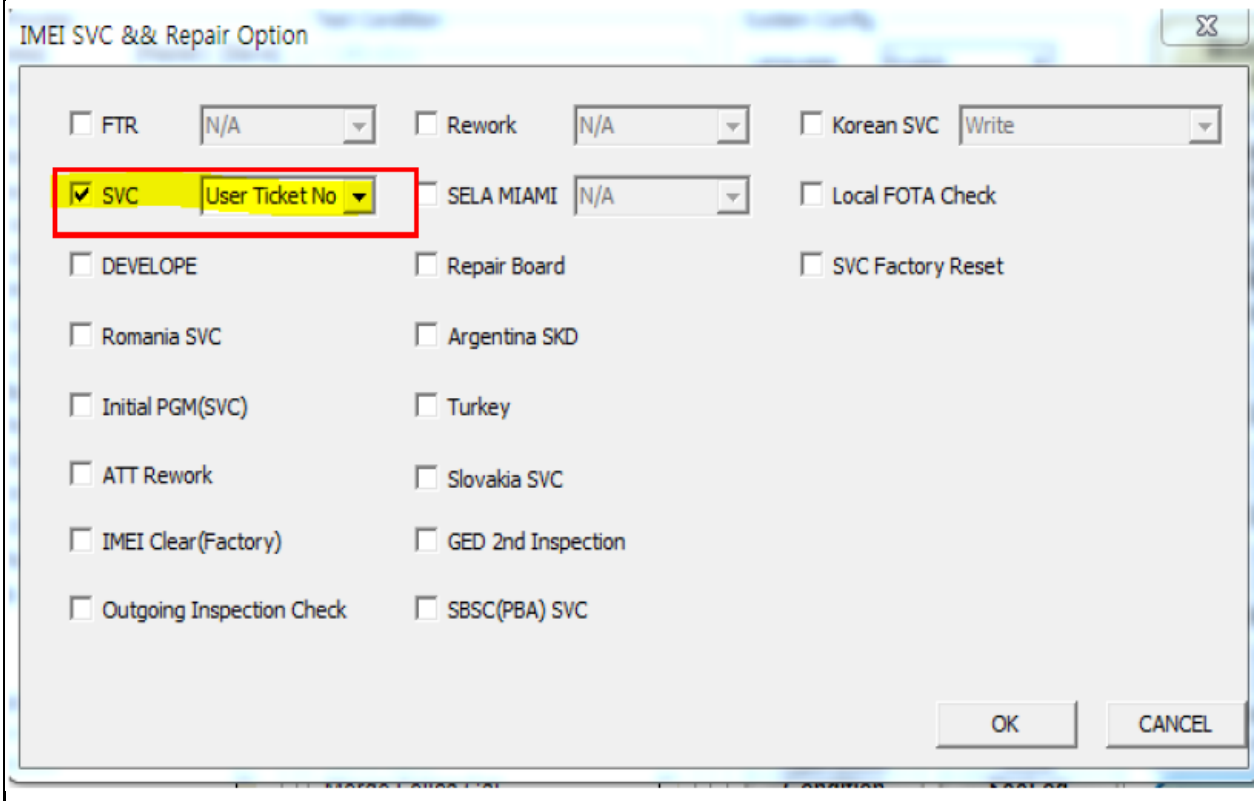


6. Level 1 Repair

6. Check IMEI Write / IMEI Check and click IMEI SVC & Repair Option.

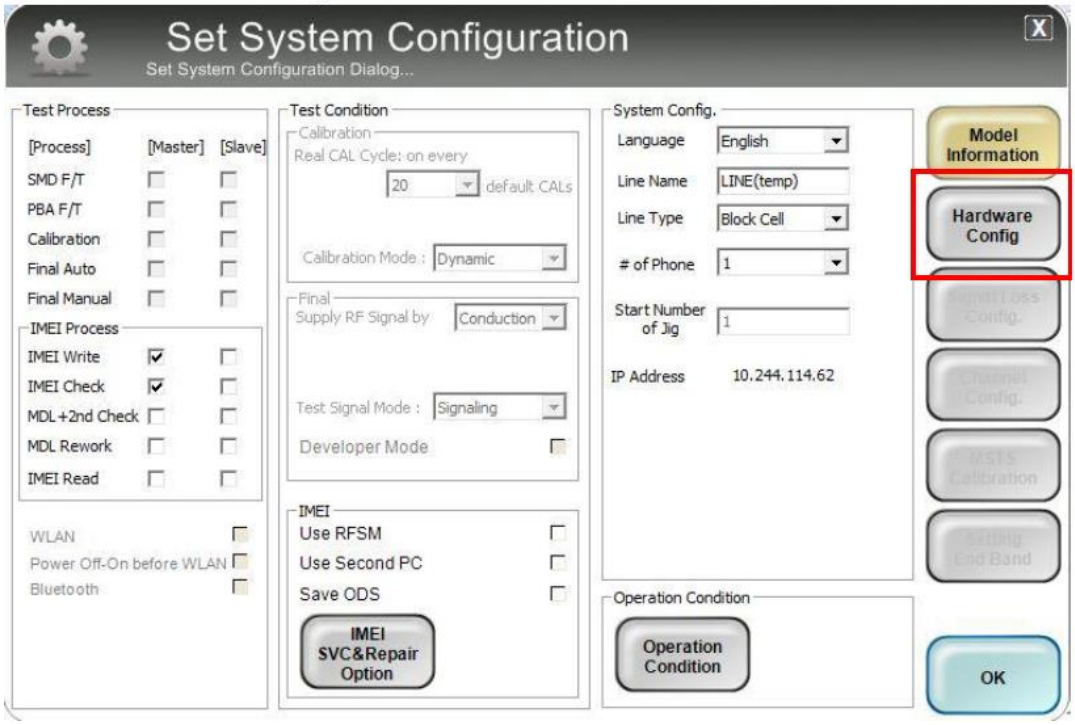


7. Check 'SVC , User Ticket No' and click OK

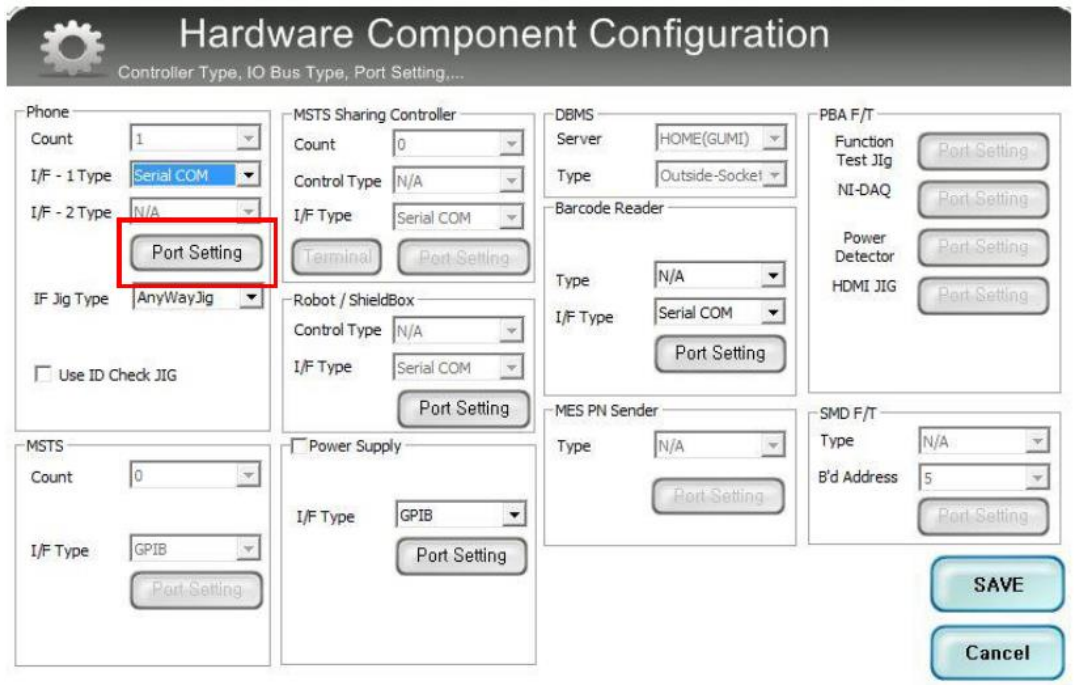


6. Level 1 Repair

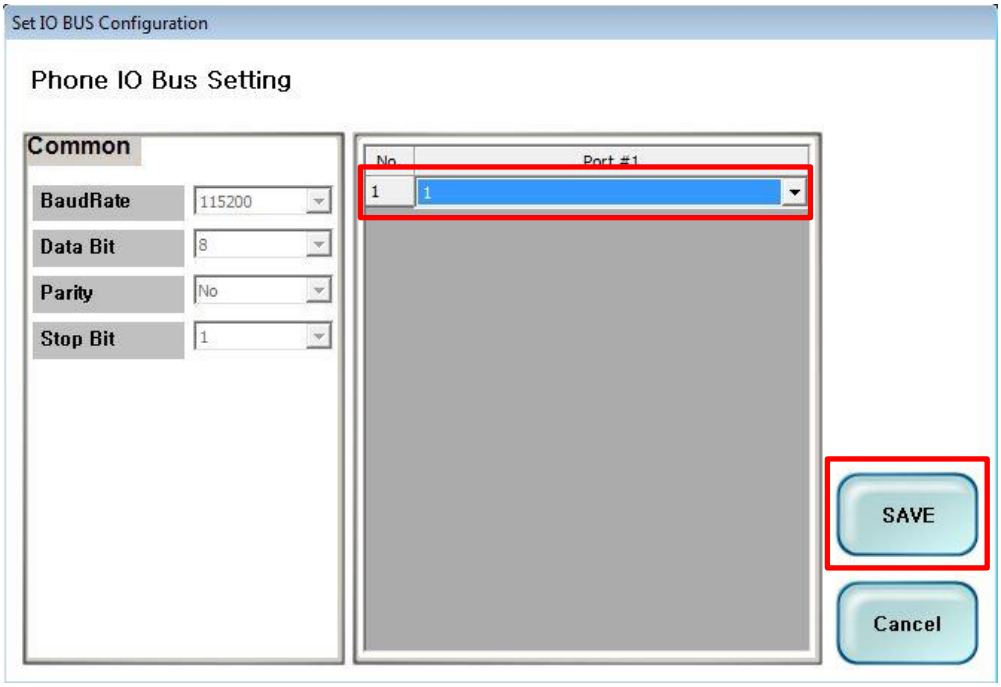
8. Click ‘Hardware Config’



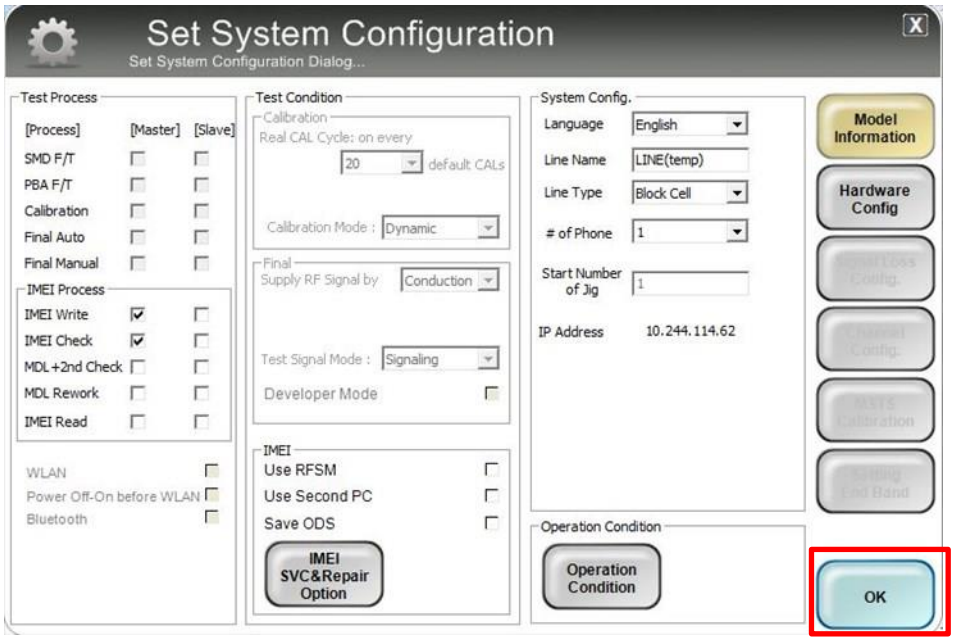
9. Click ‘Port Setting’



10. Select Port Number and SAVE

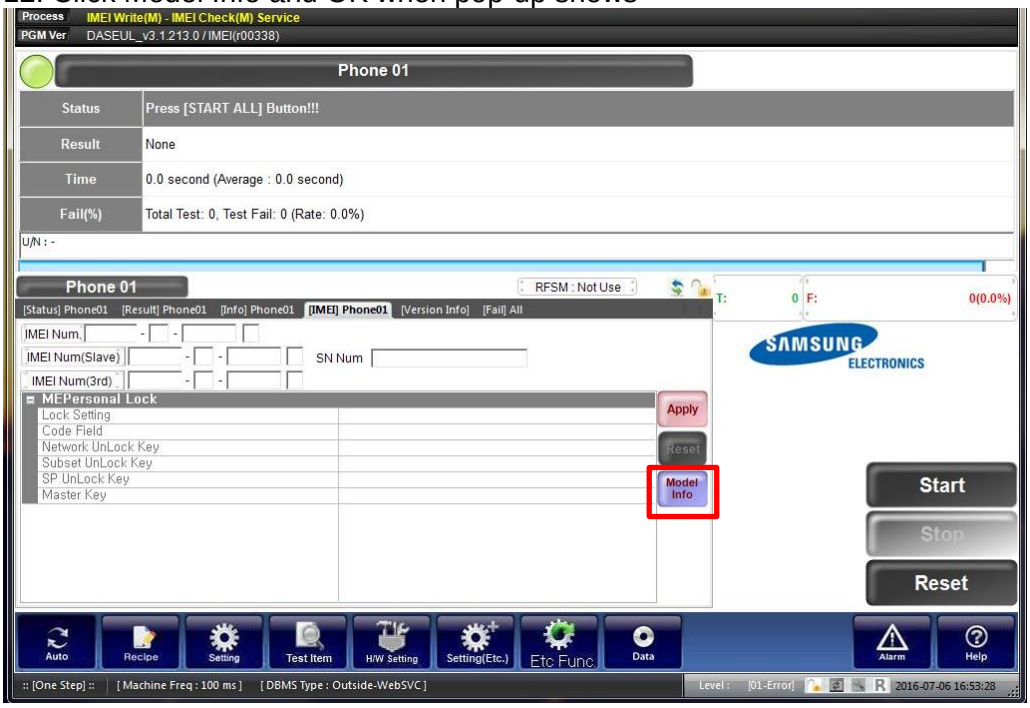


11.Click OK to proceed



6. Level 1 Repair

12. Click Model Info and OK when pop-up shows

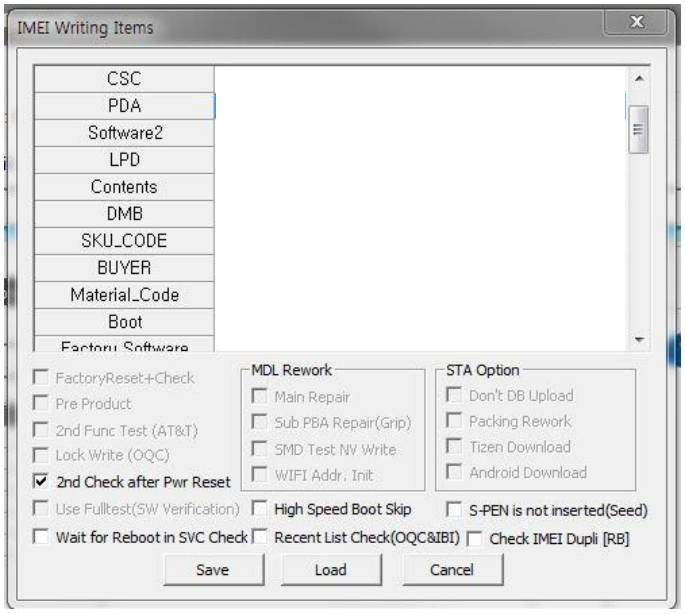


13. Click OK

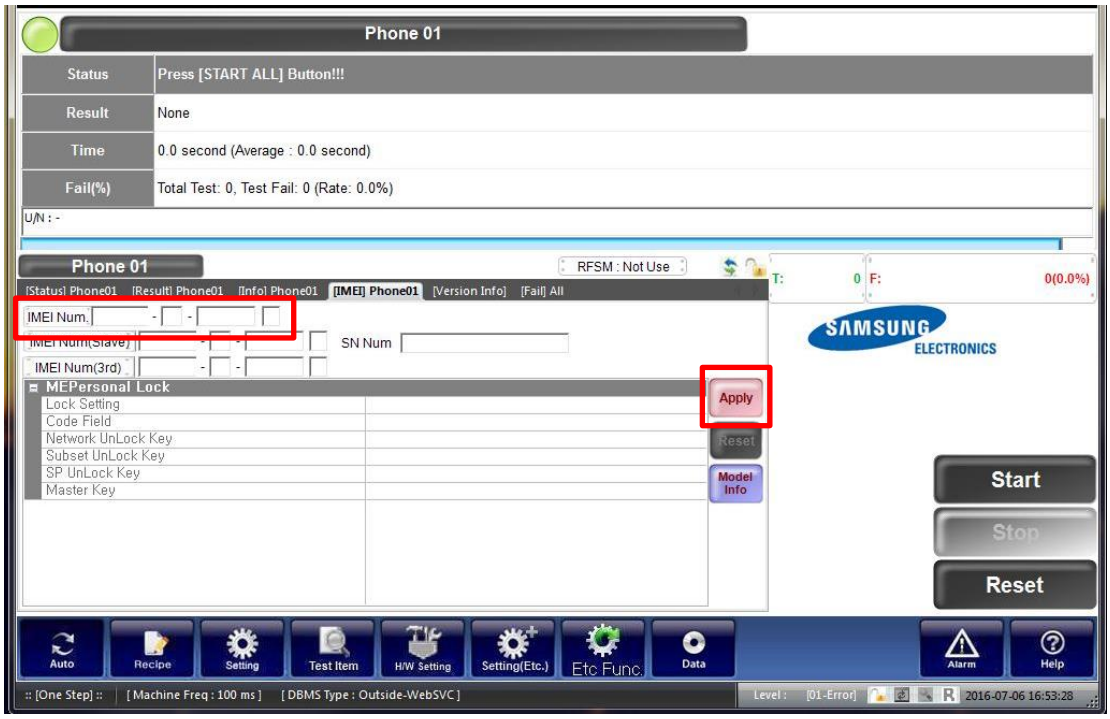
6. Level 1 Repair

14. Input SKU_CODE and BUYER, then click Save button.

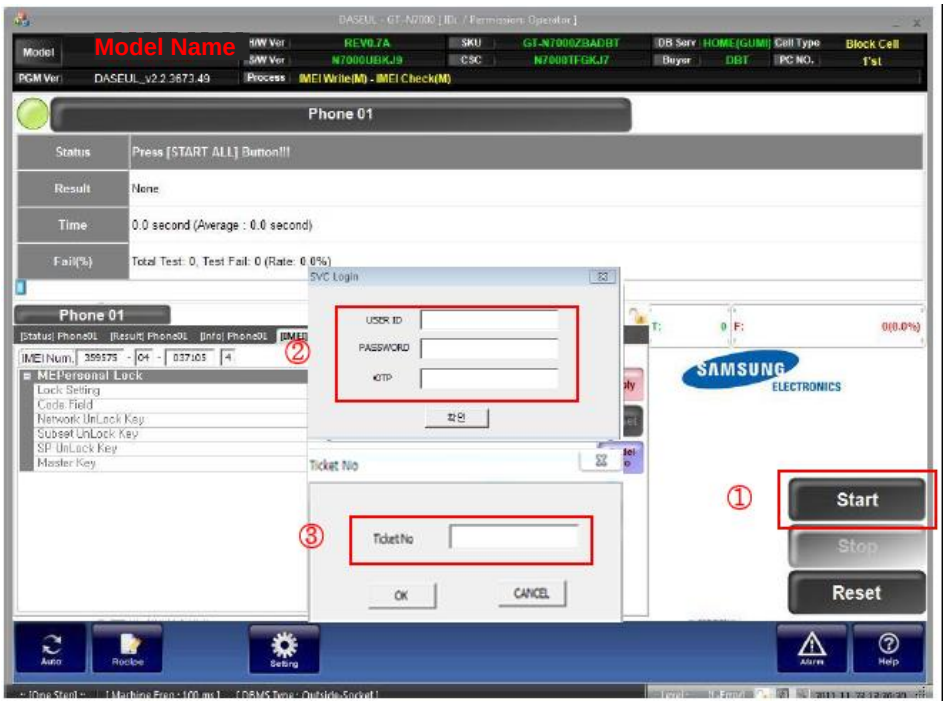
※ Refer to HHPsvc→IMEI Review to check SKU Code and buyer



15. Input IMEI Number and click Apply



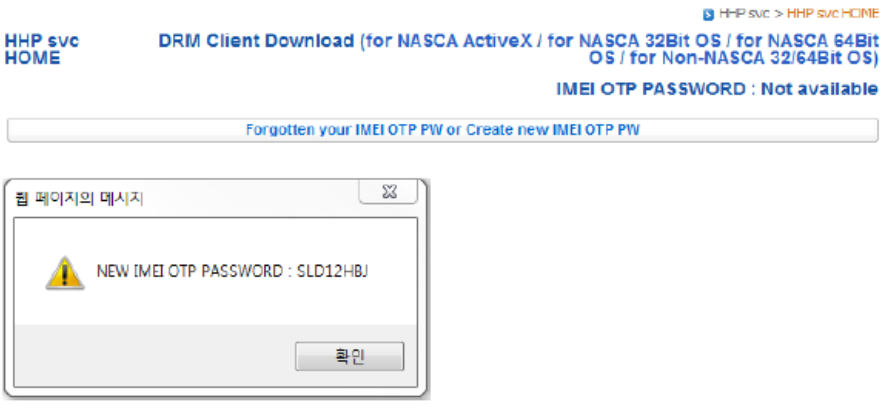
16. ① Click Start → ②Input IMEI writing ID and Password & OTP → ③Input Ticket No



※ OTP(One time Password) : OTP is valid for 6 hours.

After that, you can get new OTP by click the "Forgotten your IMEI OTP PW or Crete new IMEI OTP PW" button.

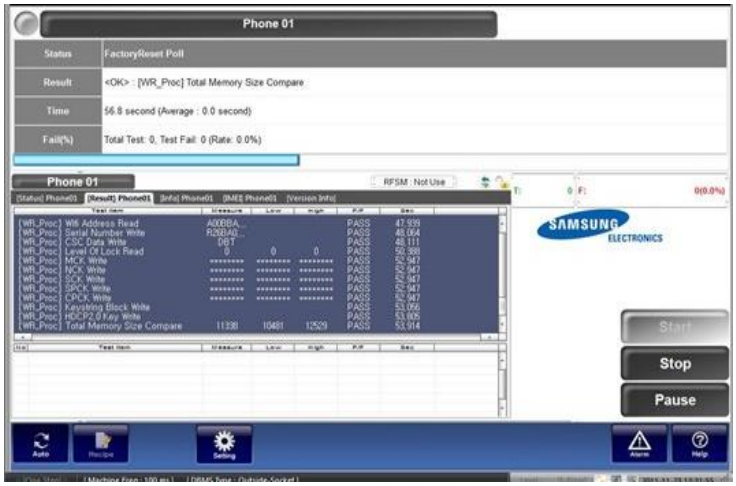
☞ OTP Location : GSPN → Knowledge → HHP svc → Home



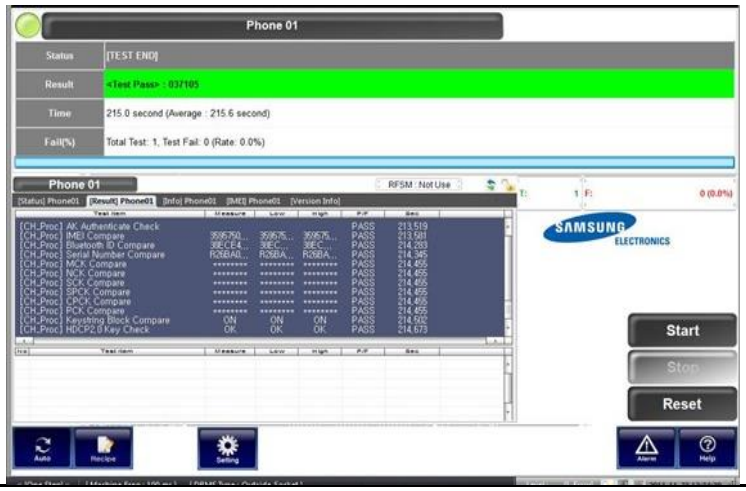
17. Connect the phone to Anyway JIG

※ When you connect the phone, the phone should be turned off.
After connecting the phone, the phone will be booted automatically.

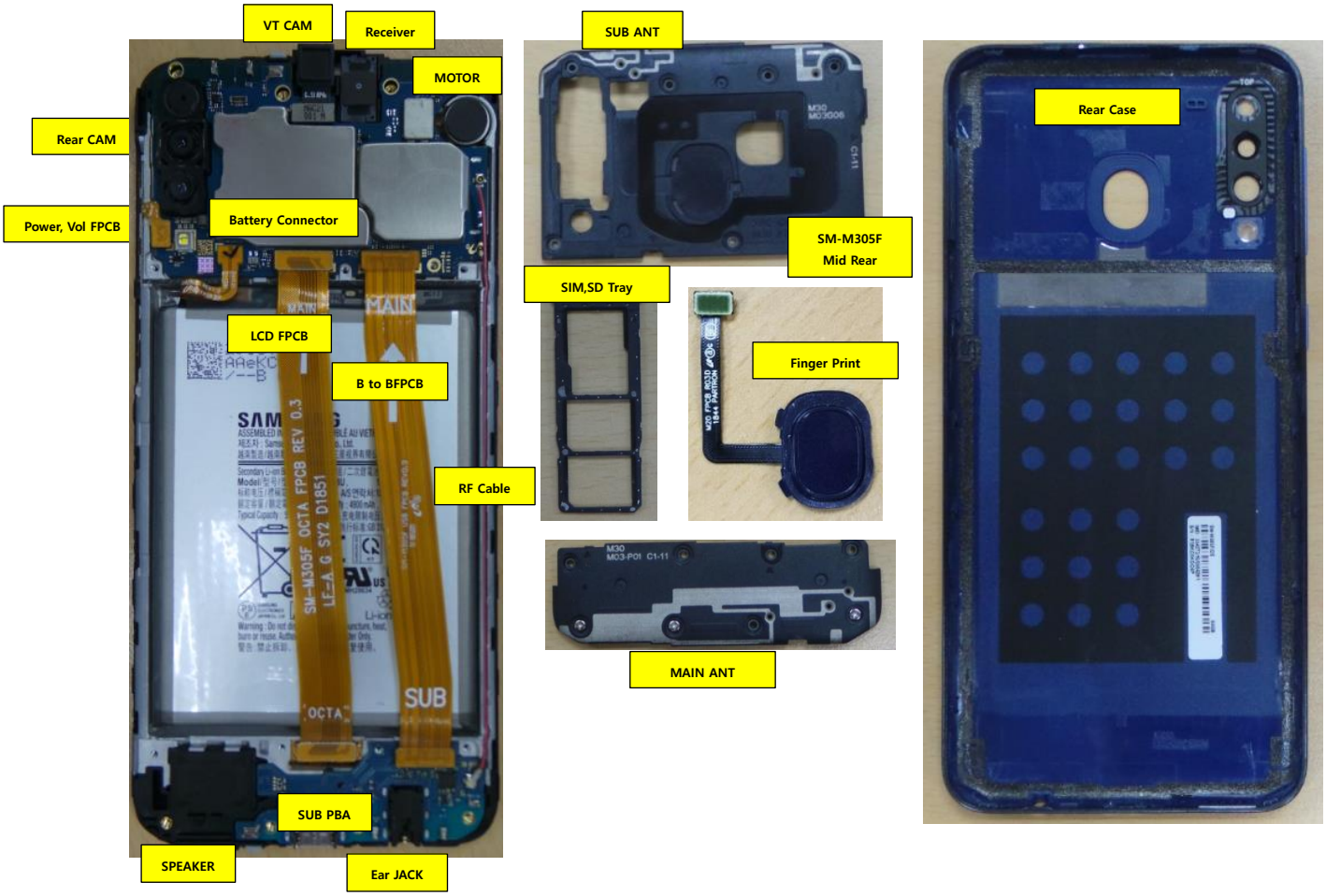
18. IMEI Writing Proceeding



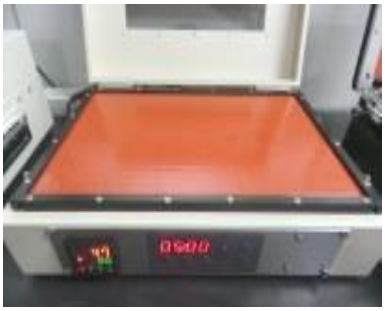
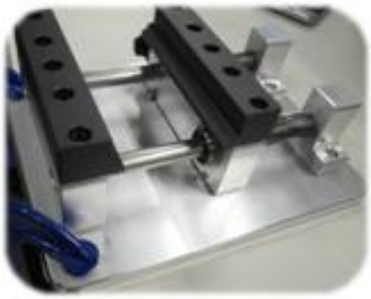
19. IMEI Writing Success



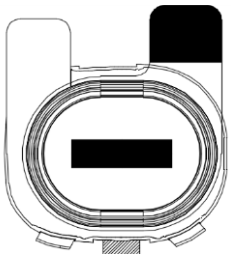
7-1. Components on the Rear Case



7-2. Pre-requisite

	
Tweezers / Disass'y Stick / Screw Driver	**Anti-static Gloves**
	
Anti-static Mat	**Hot Plate**
	
A OCTA Disassembly Holder	**OCTA Disassembly Upper**
	
Ethyl Alcohol	**Cotton Swab**

7-3. Parts which must be changed after repair

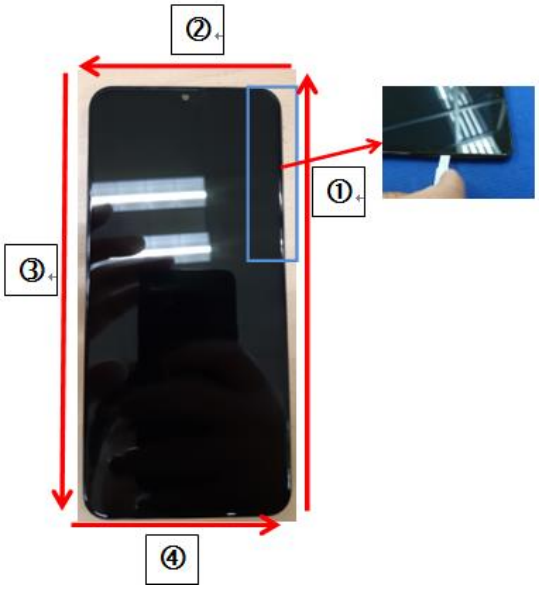
BOM Description & part code	Image	Remarks
Finger Print Tape [GH81-17674A]		Whenever re-assemble Rear cover at Finger Print part. Remove old tape and use new tape

7-4. Disassembly

1 Remove SIM/SD Tray..

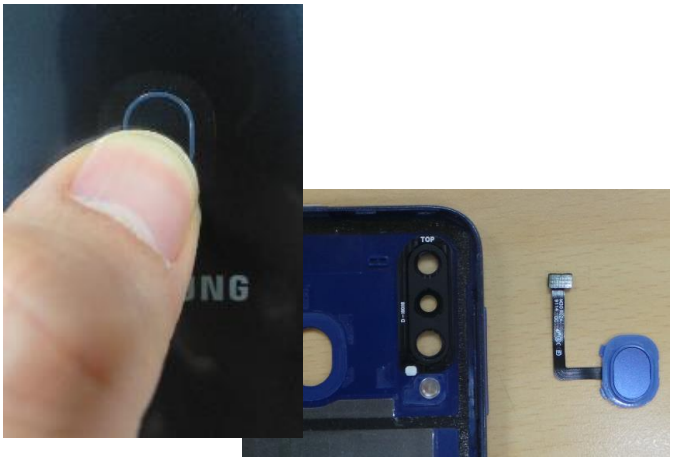
※ Caution
Be care of scratch.

2 Remove Rear Cover.
SIM/SD area → Upper → Right → Below



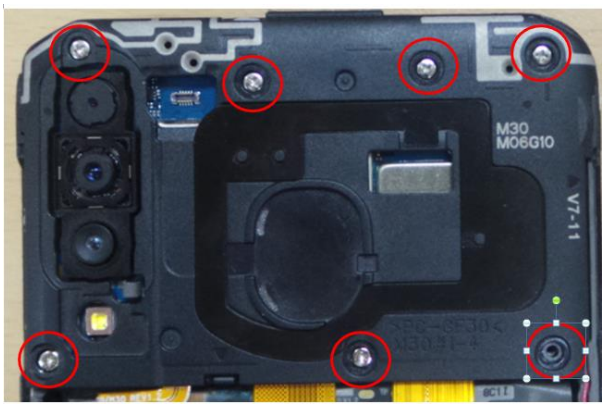
※ Caution
Be care of scratch.

3 Remove Finger print FPCB using tool and detach Finger print.

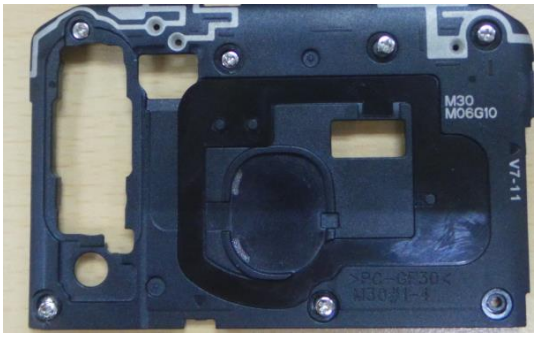
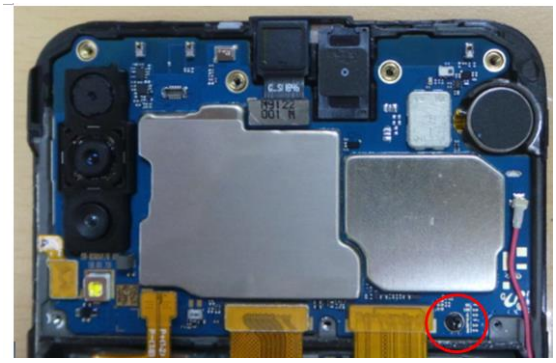
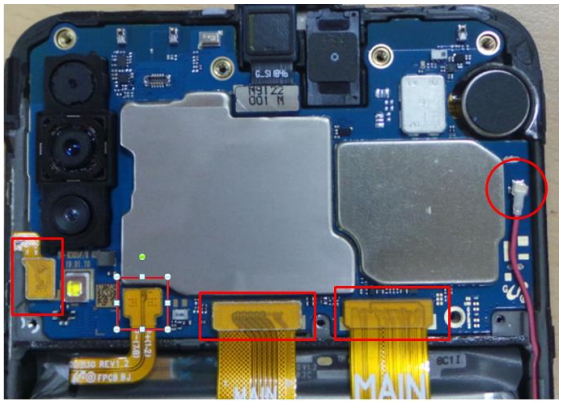
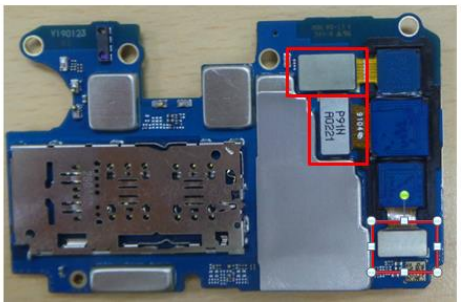


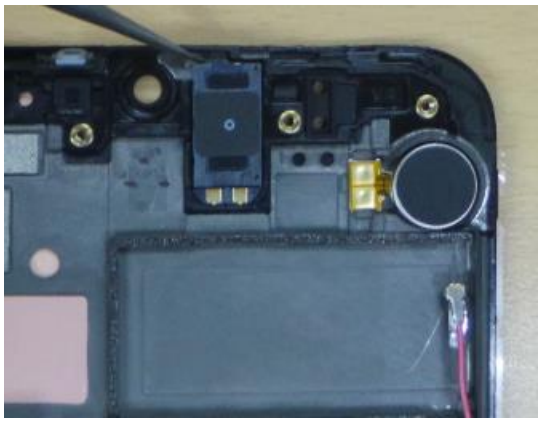
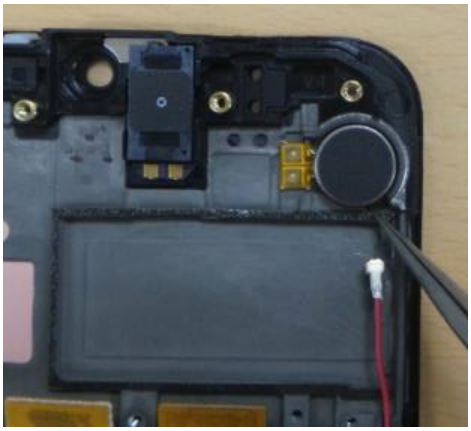
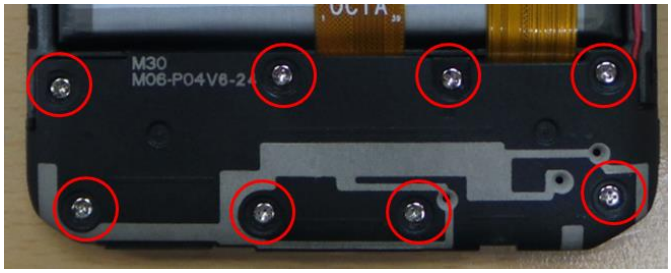
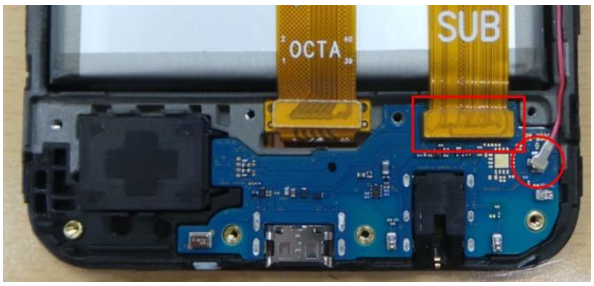
※ Caution
1) Be care of scratch.
2) Be care of Rear and Finger print damage.

4 Remove Mid Rear Screw.

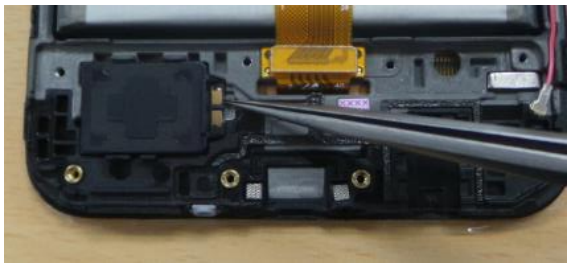


※ Caution
Be care of Rear damage.

5 Remove Mid Rear.	**6** Remove 1 PBA screw.
	
※ Caution Be care of scratch.	※ Caution Be careful not to damage the PBA.
7 Remove FPCB Connectors.	**8** Remove CAM connectors.
	 
※ Caution Be care of several kinds of damage at PBA and FPCB.	※ Caution Be careful not to damage the Camera Module.

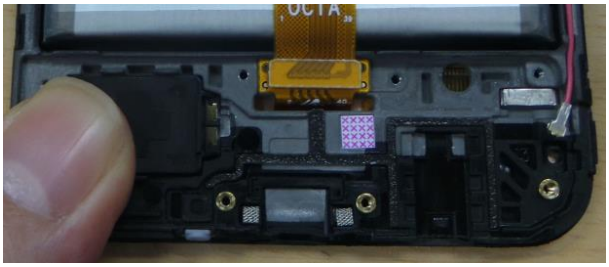
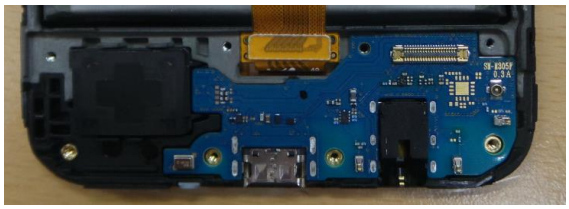
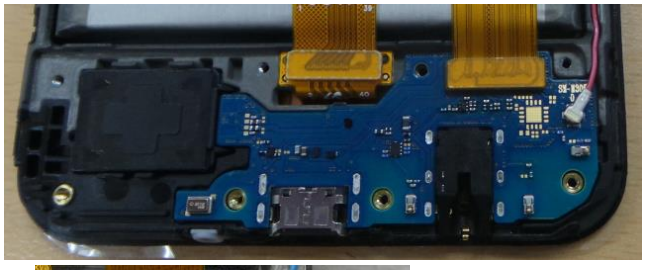
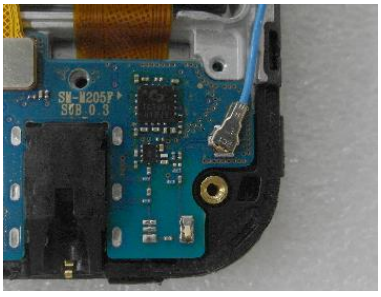
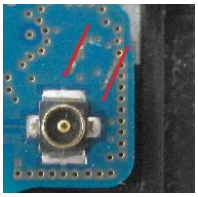
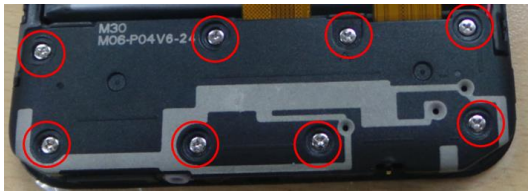
9 Detach RCV from Front Ass'y. 	**10** Detach Motor from Front Ass'y. 
※ Caution Be careful not to damage the RCV.	※ Caution Be careful not to damage the Motor.
11 Remove Main ANT. 	**12** Remove B to B FPCB and Sub PBA and RF Cable. 
※ Caution Be careful scratch.	※ Caution Be careful not to damage the Sub PBA and connector.

13	Remove SPK.



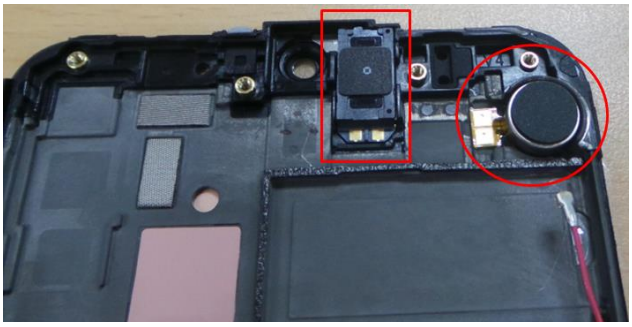
※ Caution
Be careful not to damage the SPK.

7-5. Assembly

1 Attach SPK on Front Ass'y. 	**2** Attach Sub PBA on Front Ass'y. 
※ Caution Be care of SPK damage.	※ Caution Be care of RCV damage.
3 Attach RF Cable and B to B FPCB.   	**4** Attach Main ANT in below area. and Screw insertion 8 points Torque Value : 1.15kgf ±7% 
※ Caution Please keep the guide line for RF Cable.	※ Caution Please keep the guide line for RF Cable.

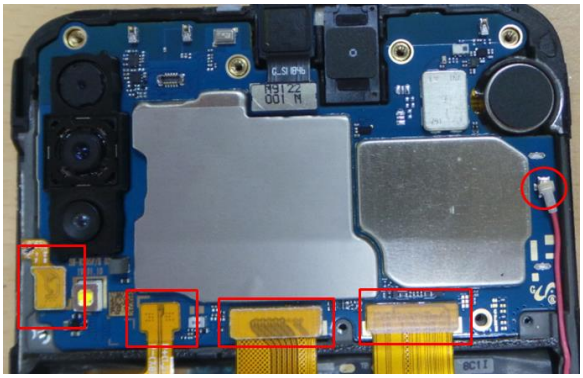
7. Level 2 Repair

5 Attach Motor and Receiver in upper area.



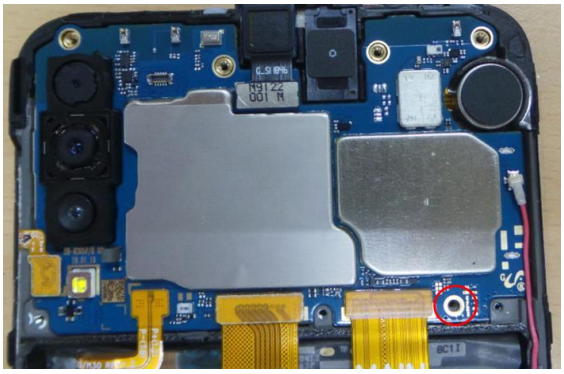
※ Caution
1) Be care of scratch CAM renz.
2) Be care of damage each part.

6 Assemble the PBA and connect FPCB.



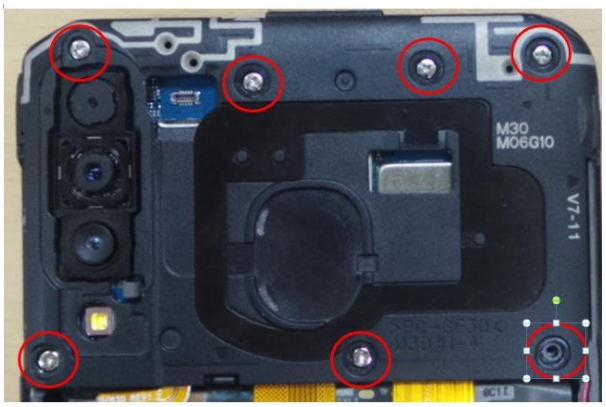
※ Caution
1) Be care of camera lenz.
2) Check for each connector connection.

7 Screw insertion 1 Point.
* Torque Value : 1.2 ±7%



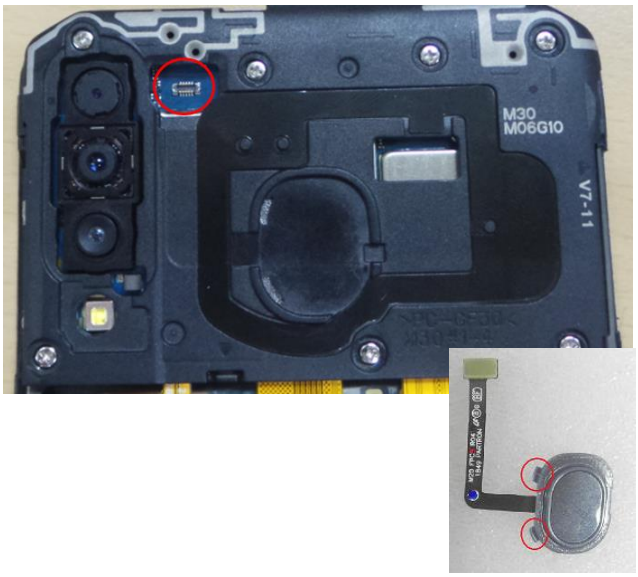
※ Caution
Be care of PBA damage.

8 Assemble Mid Rear and Sub ANT and screw insertion 7 point
* Torque Value : 1.2 ±7%



※ Caution
Be care of Tape damage.

9	Assemble Finger print module and connect FPCB.



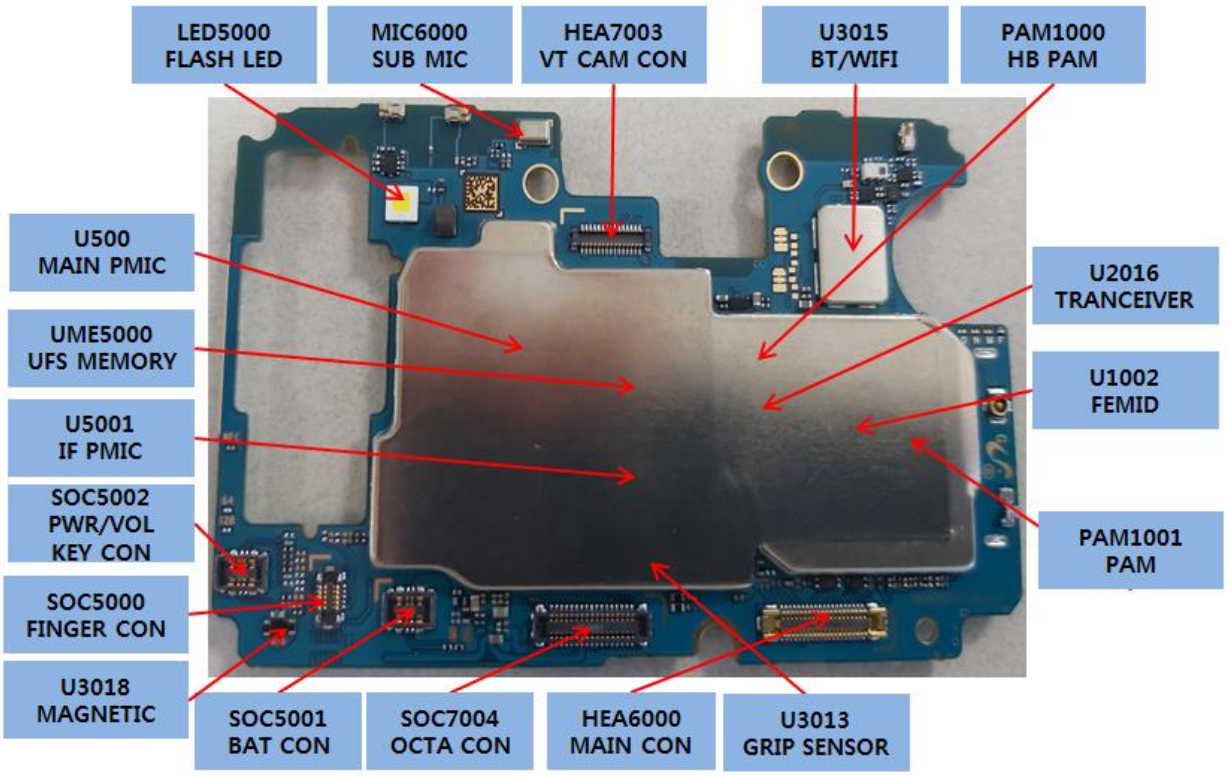
※ Caution
1) Be care of Finger Print FPCB damage.
2) Be care of 2 point of hook.

10	Assemble cover rear and insert SIM/SD Tray.

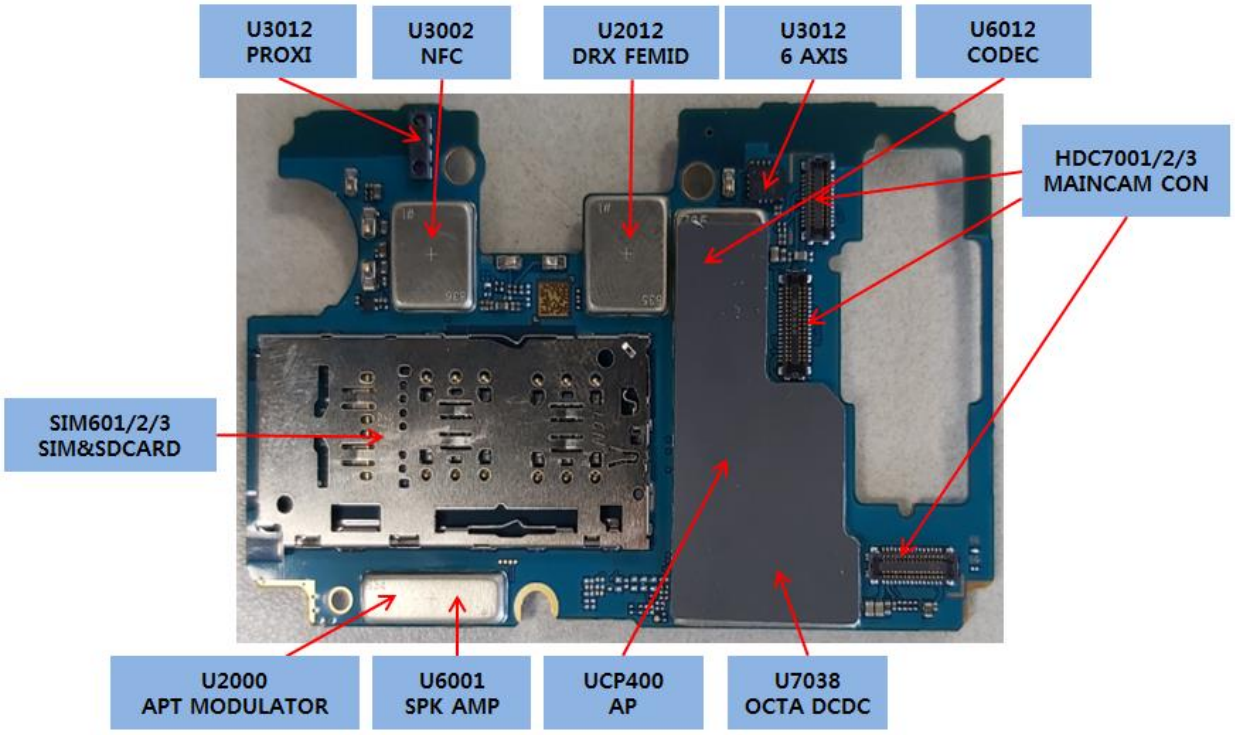
※ Caution
Be care of scratch Rear cover.

8-1. Components Layout

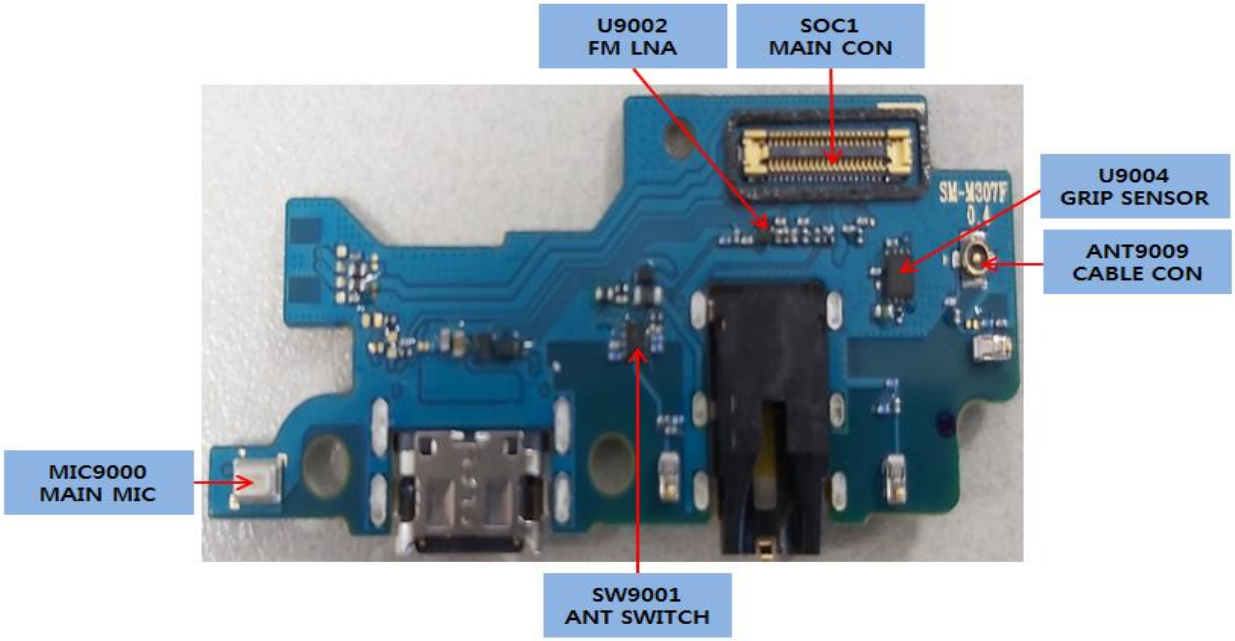
MAIN PBA (TOP SIDE)



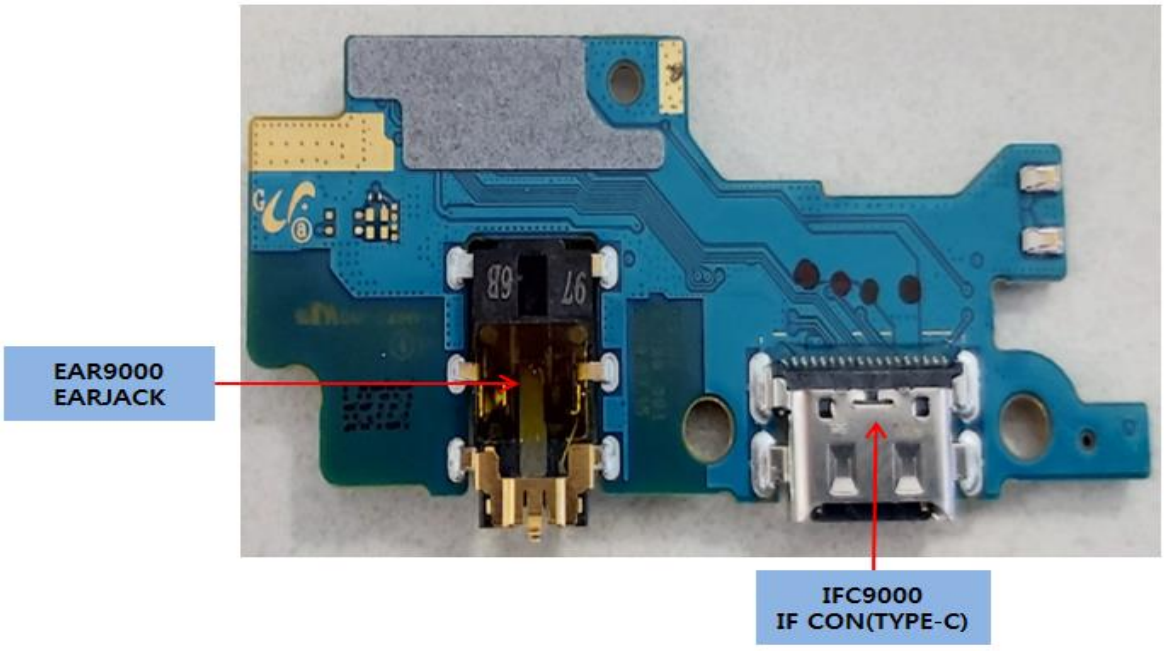
MAIN PBA (BOTTOM SIDE)

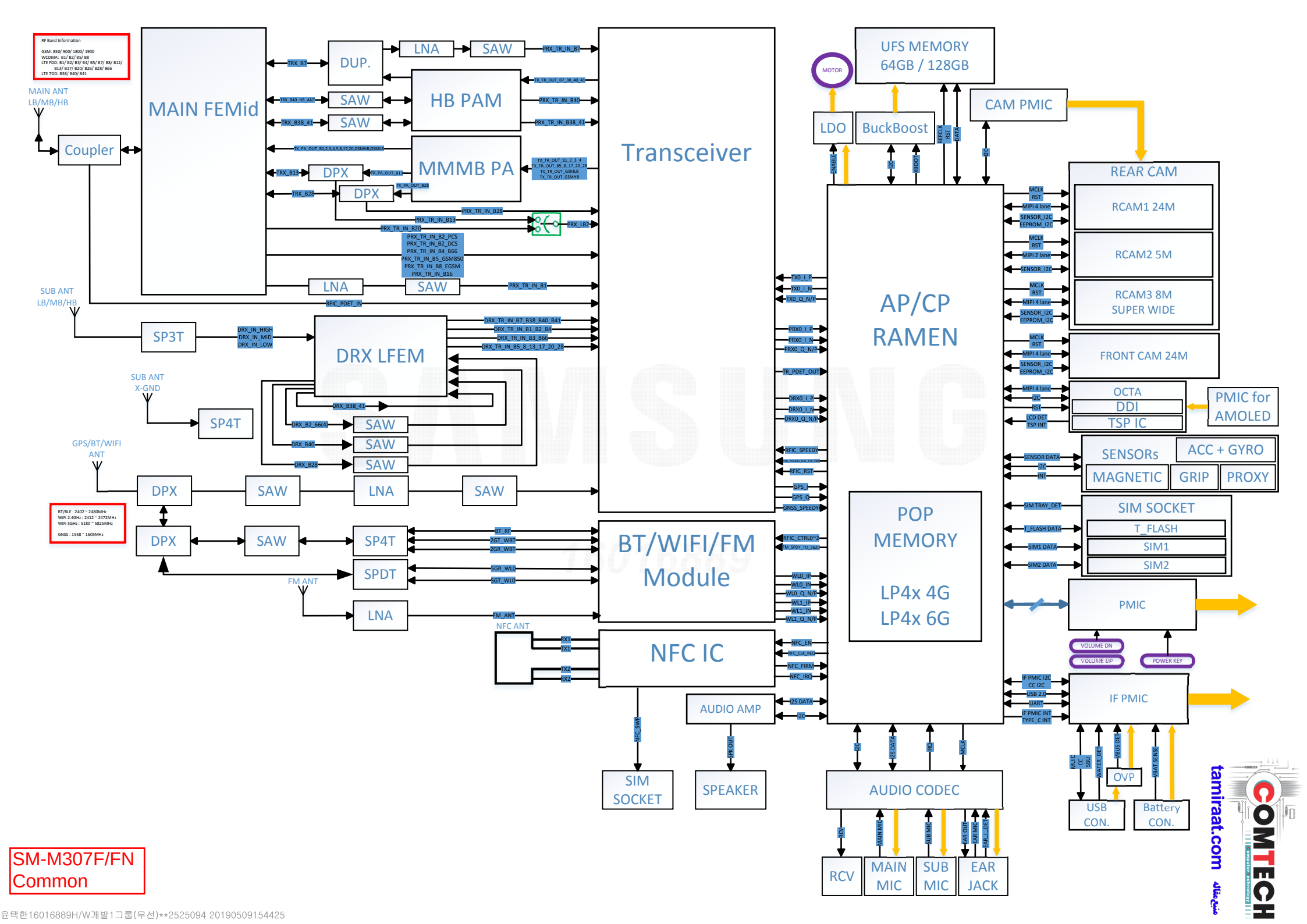


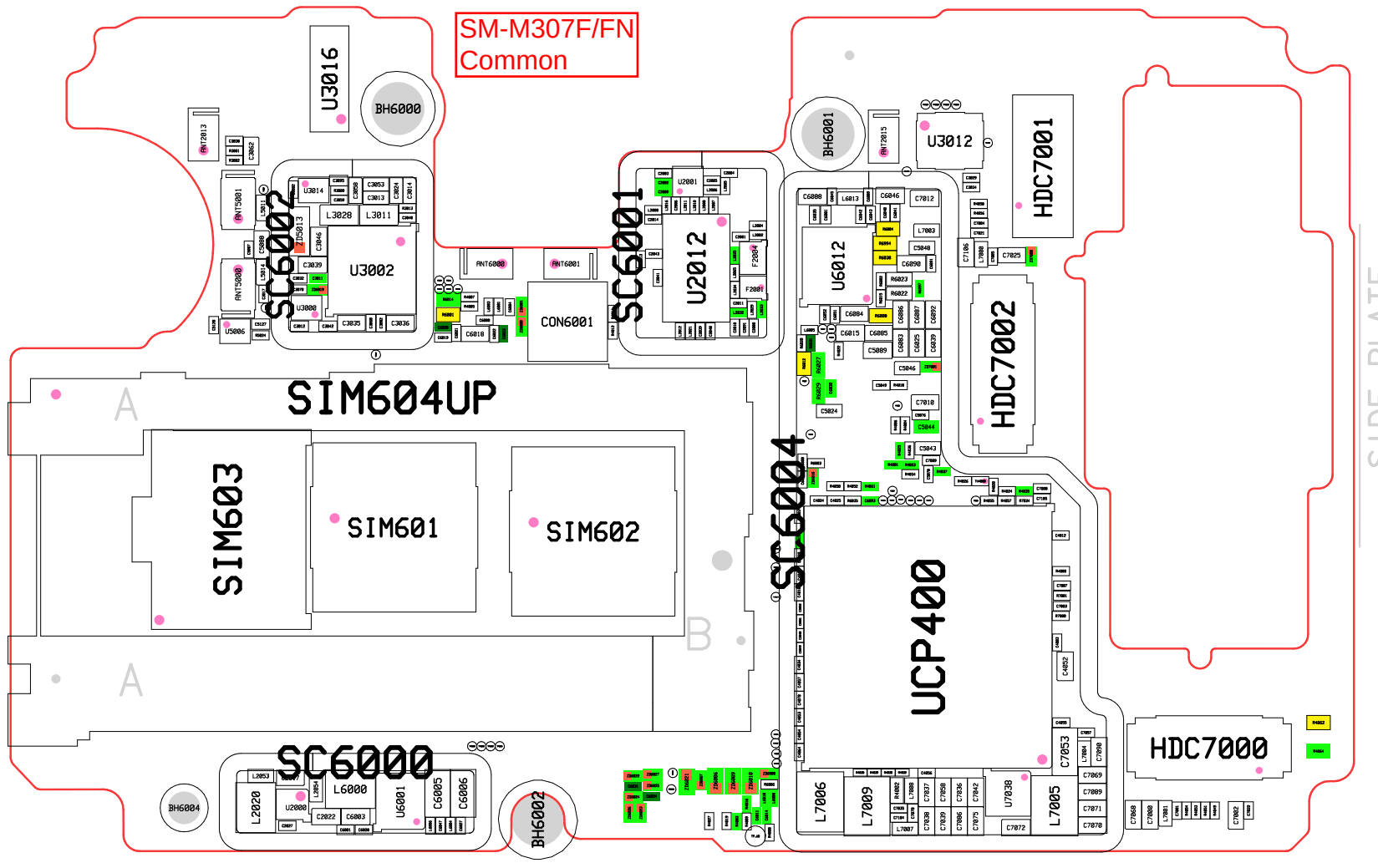
SUB PBA (TOP SIDE)

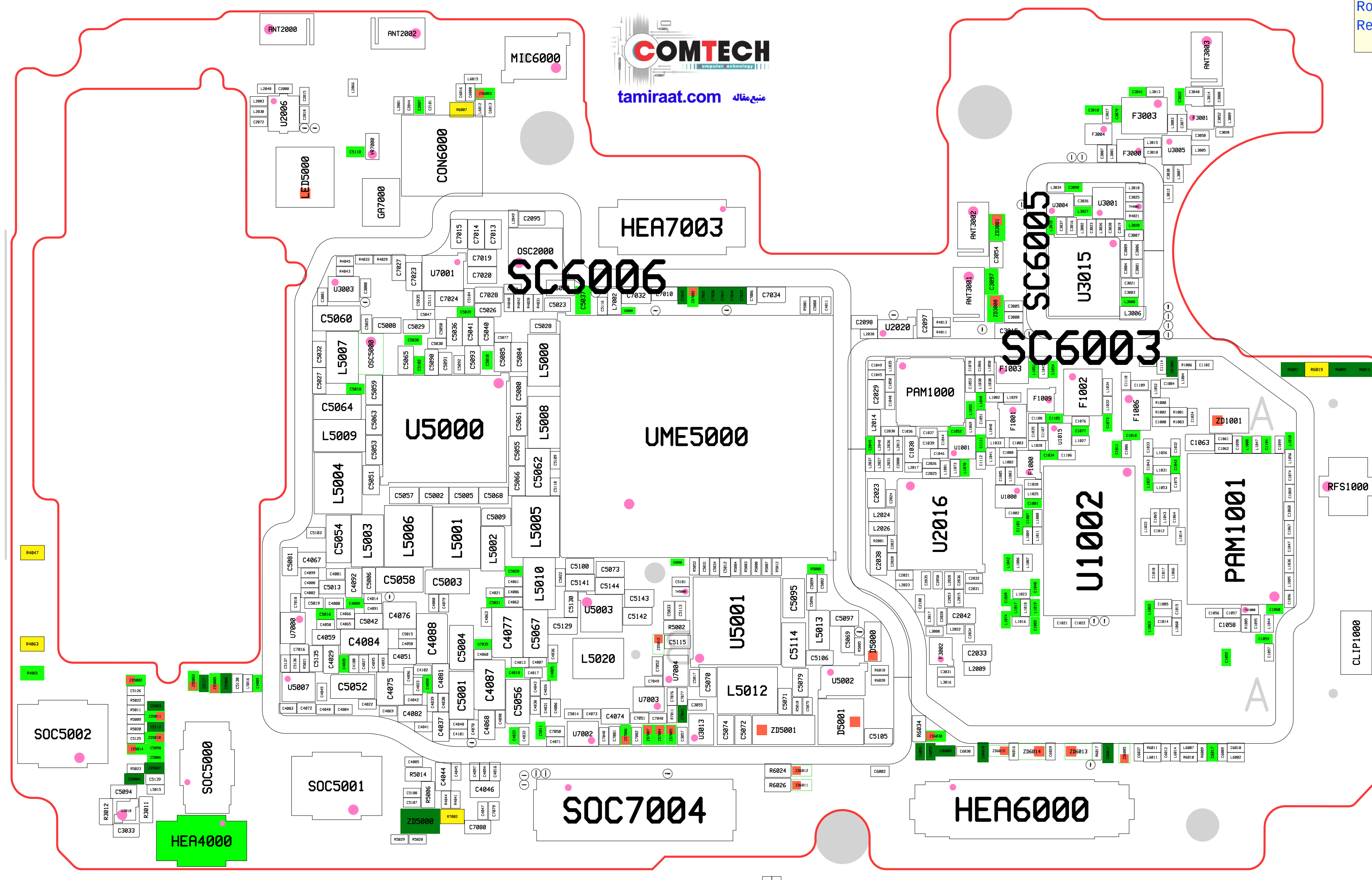


SUB PBA (BOTTOM SIDE)



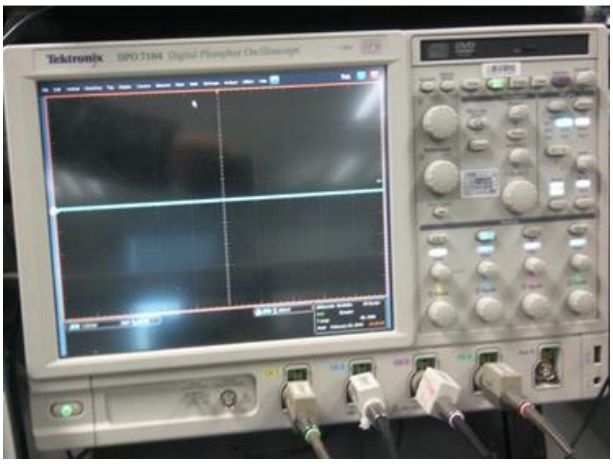
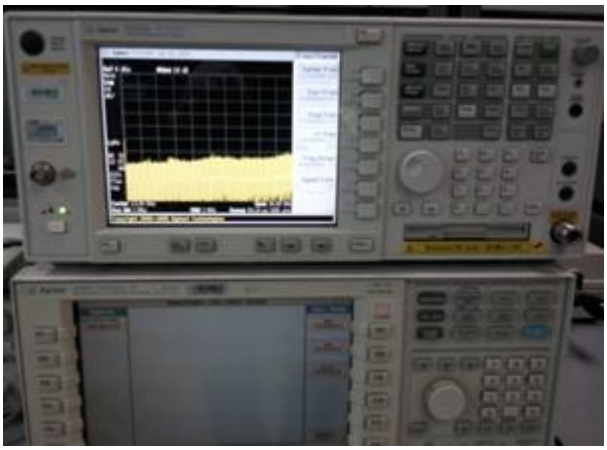

RF Band Information
GSM: 850/ 900/ 1800/ 1900
WCDMA: B1/ B2/ B5/ B8
LTE FDD: B1/ B2/ B3/ B4/ B5/ B7/ B8/ B12/ B13/ B17/ B20/ B26/ B28/ B66
LTE TDD: B38/ B40/ B41
MAIN ANT LB/MB/HB
Coupler
MAIN FEMid
TRX_B7
DUP.
LNA
SAW
PRX_TR_IN_B7
TX_TR_OUT_B7_38_40_41
HB PAM
TRX_B40_HB_ANT
SAW
PRX_TR_IN_B40
TRX_B38_41
SAW
PRX_TR_IN_B38_41
TX_PA_OUT_B1,2,3,4,5,8,17,20,GSMHB,GSMLB
MMMB PA
TRX_B13
DPX
TX_PA_OUT_B13
TX_TR_OUT_B1_2_3_4
TX_TR_OUT_B5_8_17_20_28
TX_TR_OUT_GSMLB
TX_TR_OUT_GSMHB
TRX_B28
DPX
TX_PA_OUT_B28
PRX_TR_IN_B28
PRX_TR_IN_B13
PRX_LB2
PRX_TR_IN_B20
PRX_TR_IN_B2_PCS
PRX_TR_IN_B2_DCS
PRX_TR_IN_B4_B66
PRX_TR_IN_B5_GSM850
PRX_TR_IN_B8_EGSM
PRX_TR_IN_B16
LNA
SAW
PRX_TR_IN_B1
RFIC_PDET_IN
SUB ANT LB/MB/HB
SP3T
DRX_IN_HIGH
DRX_IN_MID
DRX_IN_LOW
DRX LFEM
DRX_TR_IN_B7_B38_B40_B41
DRX_TR_IN_B1_B2_B4
DRX_TR_IN_B3_B66
DRX_TR_IN_B5_8_13_17_20_28
SUB ANT X-GND
SP4T
DRX_B38_41
DRX_B2_66(4)
SAW
DRX_B40
SAW
DRX_B28
SAW
GPS/BT/WIFI ANT
DPX
SAW
LNA
SAW
BT/BLE : 2402 ~ 2480MHz
WiFi 2.4GHz : 2412 ~ 2472MHz
WiFi 5GHz : 5180 ~ 5825MHz
GNSS : 1558 ~ 1605MHz
DPX
SAW
SP4T
BT_RF
2GT_WBT
2GR_WBT
SPDT
5GR_WLO
5GT_WLO
FM ANT
LNA
FM_ANT
Transceiver
BT/WIFI/FM Module
NFC ANT
RX1
TX1
TX2
RX2
NFC IC
NFC_SWP
SIM SOCKET
AUDIO AMP
SPK_OUT
SPEAKER
MOTOR
UFS MEMORY 64GB / 128GB
LDO
BuckBoost
CAM PMIC
RFCLK
RST
DATA
ENABLE
2V
VBOOT
2V
AP/CP RAMEN
POP MEMORY
LP4x 4G
LP4x 6G
TX0_I_P
TX0_I_N
TX0_Q_N/P
PRX0_I_P
PRX0_I_N
PRX0_Q_N/P
TR_PDET_OUT
DRX0_I_P
DRX0_I_N
DRX0_Q_N/P
RFIC_SPEEDY
RFIC_RST
GPS_I
GPS_Q
GNSS_SPEEDY
RFIC_CTRL0~2
M_SPDY_TO_SE20
WL0_IP
WL0_IN
WL0_Q_N/P
WL1_IP
WL1_IN
WL1_Q_N/P
NFC_EN
NFC_CLK_REQ
NFC_FIRM
NFC_IRQ
I2S DATA
I2C
2V
I2S DATA
IRQ
MCLK
AUDIO CODEC
KEY
MAIN MIC
SUB MIC
EAR OUT
EAR MIC
EAR_I_DET
RCV
MAIN MIC
SUB MIC
EAR JACK
REAR CAM
RCAM1 24M
RCAM2 5M
RCAM3 8M SUPER WIDE
MCLK
RST
MIPI 4 lane
MIPI 2 lane
SENSOR_I2C
EEPROM_I2C
FRONT CAM 24M
OCTA
DDI
TSP IC
LCD DET
TSP INT
PMIC for AMOLED
SENSORS
ACC + GYRO
MAGNETIC
GRIP
PROXY
SENSOR DATA
I2C
INT
SIM SOCKET
SIM TRAY_DET
T_FLASH DATA
SIM1 DATA
SIM2 DATA
T_FLASH
SIM1
SIM2
PMIC
VOLUME DN
VOLUME UP
POWER KEY
IF PMIC I2C
CC I2C
USB 2.0
UART
IF PMIC INT
TYPE_C INT
IF PMIC
MUIC
CC
SBU
WATER_DET
VBUS DET
VBAT SENS
OVP
USB CON.
Battery CON.
SM-M307F/FN
Common
윤택한16016889H/W개발1그룹(무선)**2525094 20190509154425


SM-M307F/FN
Common
U3016
BH6000
ANT2013
ANT5001
ANT5000
U3014
L3028
L3011
U3002
U3000
U5006
SC6002
SC6001
ANT6000
ANT6001
CON6001
U2001
U2012
BH6001
ANT7015
U3012
HDC7001
U6012
HDC7002
SIM604UP
SIM603
SIM601
SIM602
SC6004
UCP400
HDC7000
SC6000
L6000
U6001
U2000
BH6004
BH6002
L7006
L7009
L7005
U7038
C7072
SIDE PLATE

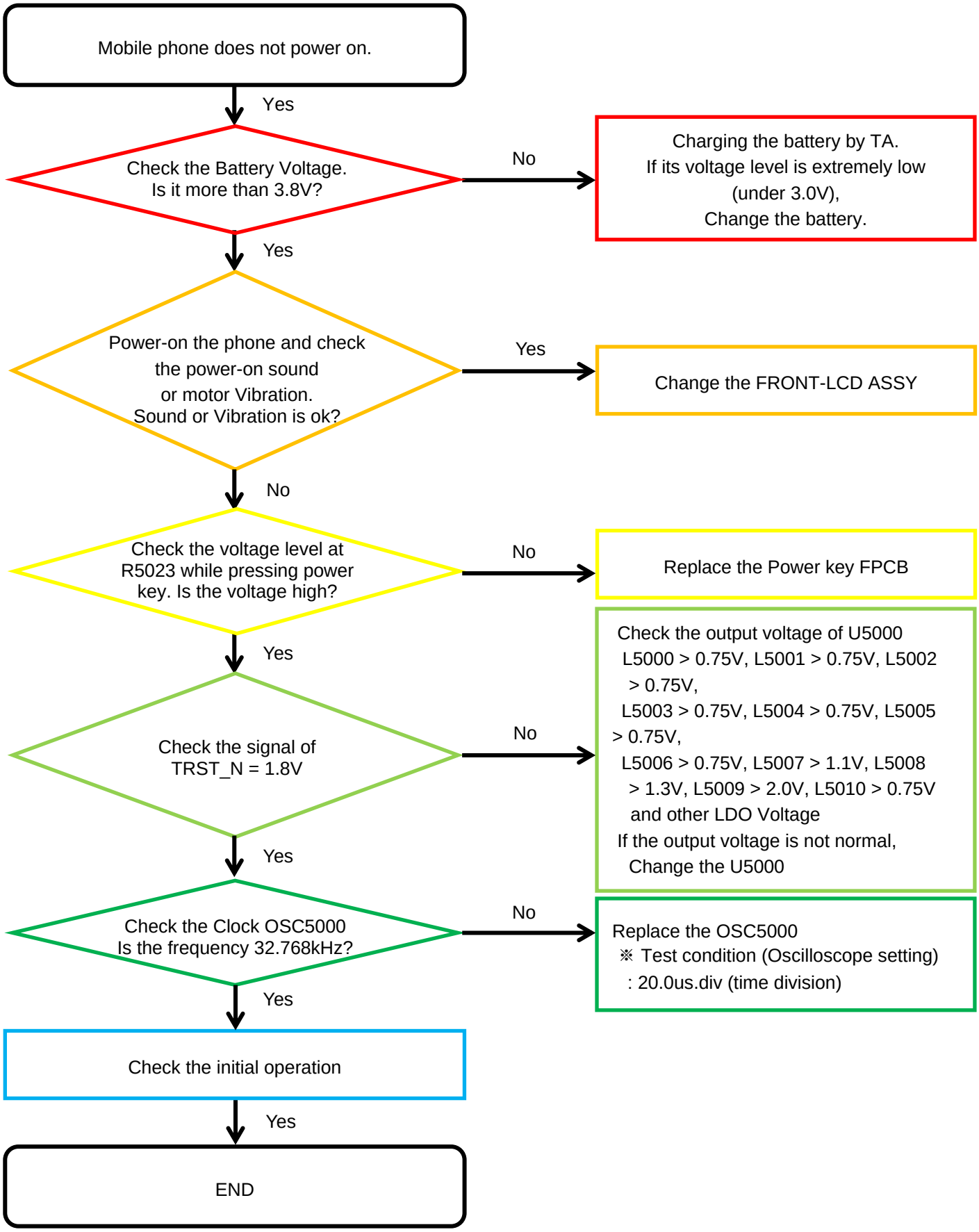


ANT2000
ANT2002
MIC6000
U2006
CON6000
LED5000
GA7000
HEA7003
SC6006
OSC2000
U7001
U3003
C5060
L5007
OSC5000
U5000
C5064
L5009
L5004
UME5000
L5006
L5001
L5003
C5054
L5002
L5005
L5008
L5010
C5058
C5003
C4084
C4088
C5004
C4077
C5067
C4087
C5001
C5056
U5003
L5020
U5001
L5013
C5114
L5012
ZD5001
D5001
U5002
U7003
U7002
U7004
U5007
C5052
C4076
SOC5002
SOC5000
SOC5001
HEA4000
SOC7004
ZD5000
HEA6000
SC6005
SC6003
U3015
U3001
U3004
ANT3002
ANT3001
ANT3003
F3003
F3000
U3005
U2020
PAM1000
U2016
U1002
PAM1001
ZD1001
RFS1000
CLIP1000
F1006
F1002
F1009
F1003
U1001
U1000
C1063
C1058
C2033
L2009
U5005

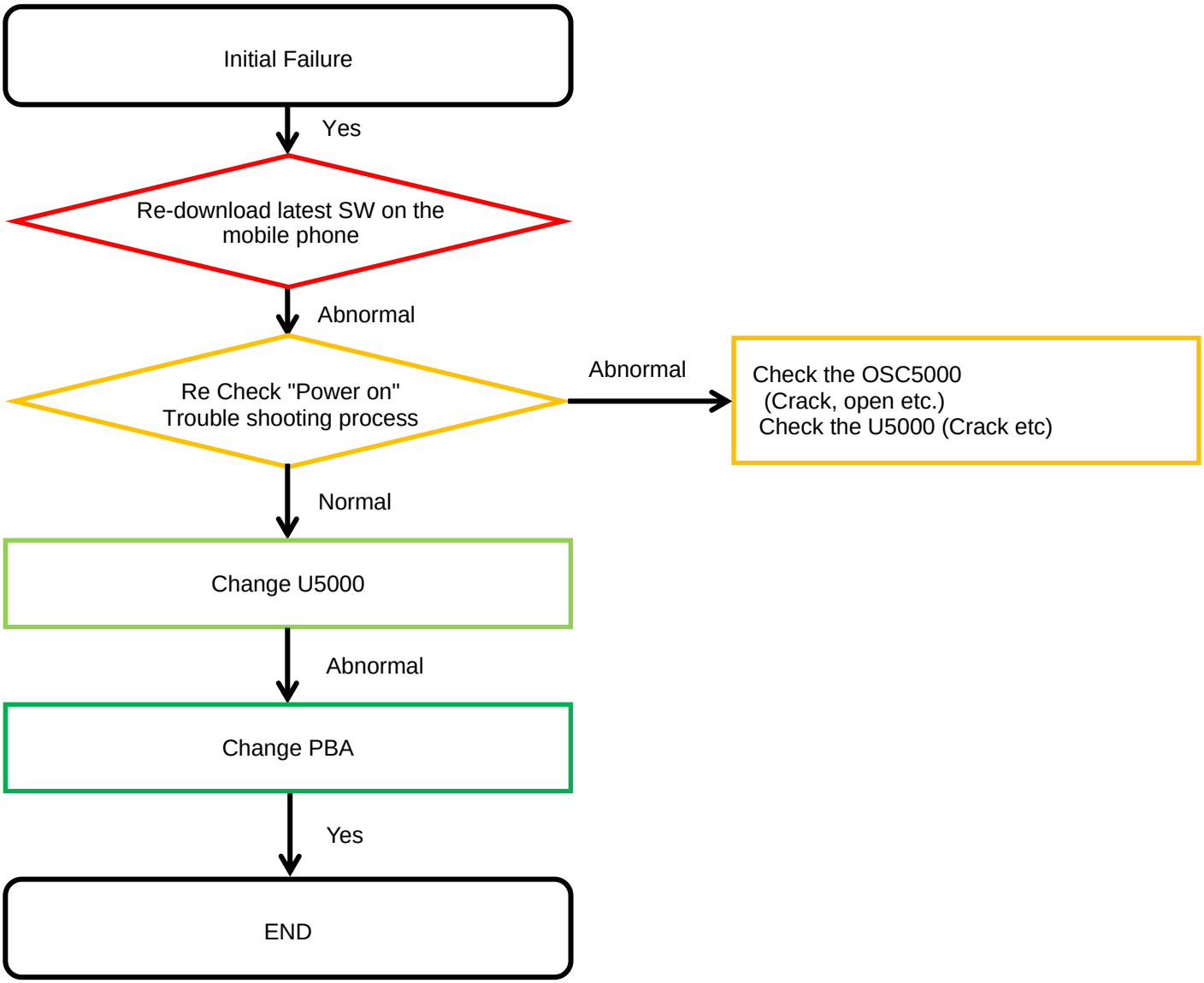
8-3. Flow chart of Troubleshooting.

	
Oscilloscope	**Digital Multimeter**
	
Power Supply	**+ driver, ESD Safe Tweezer**
	
8960 & Spectrum Analyzer	**Soldering iron**

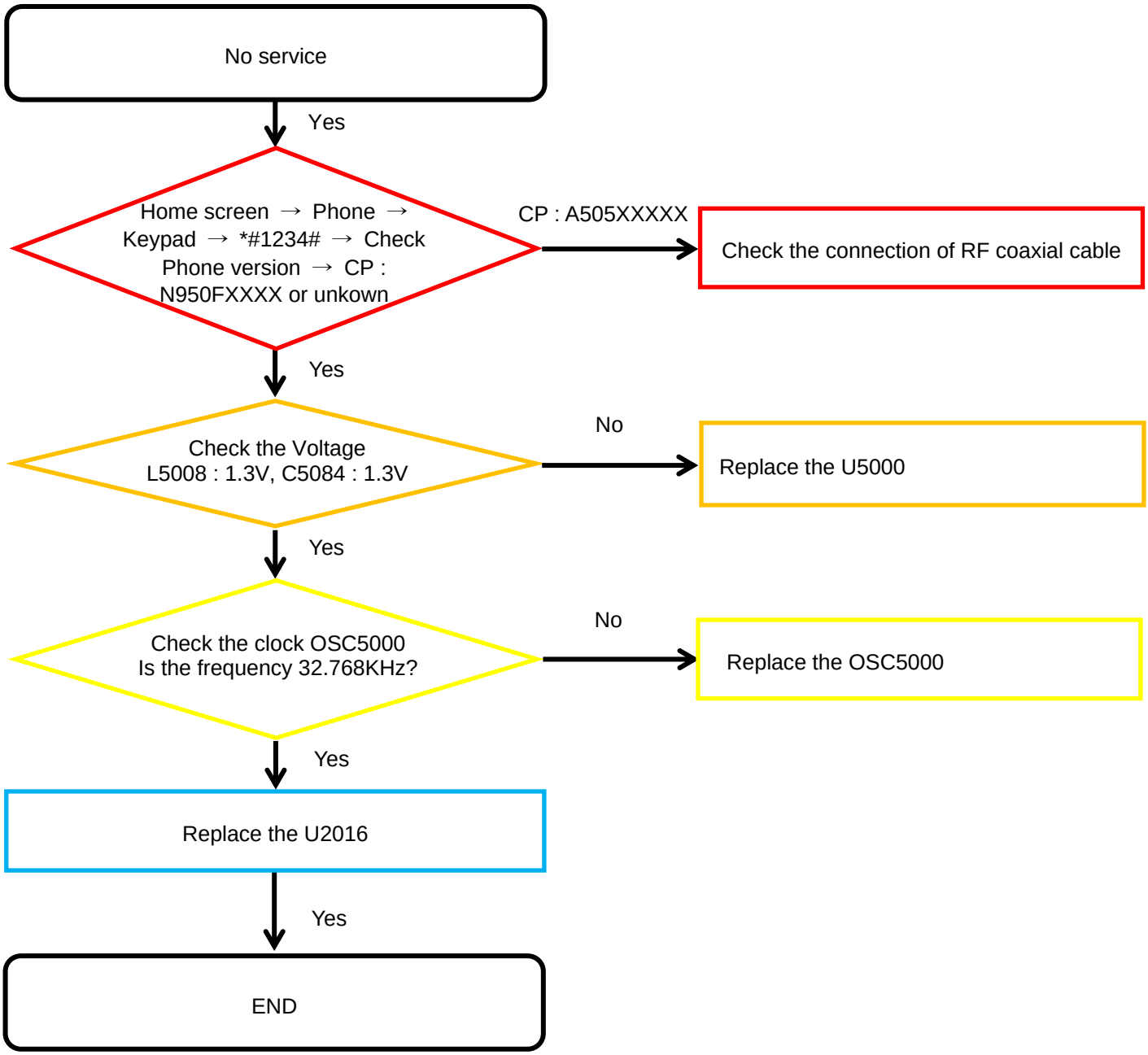
8-4-1. Power On



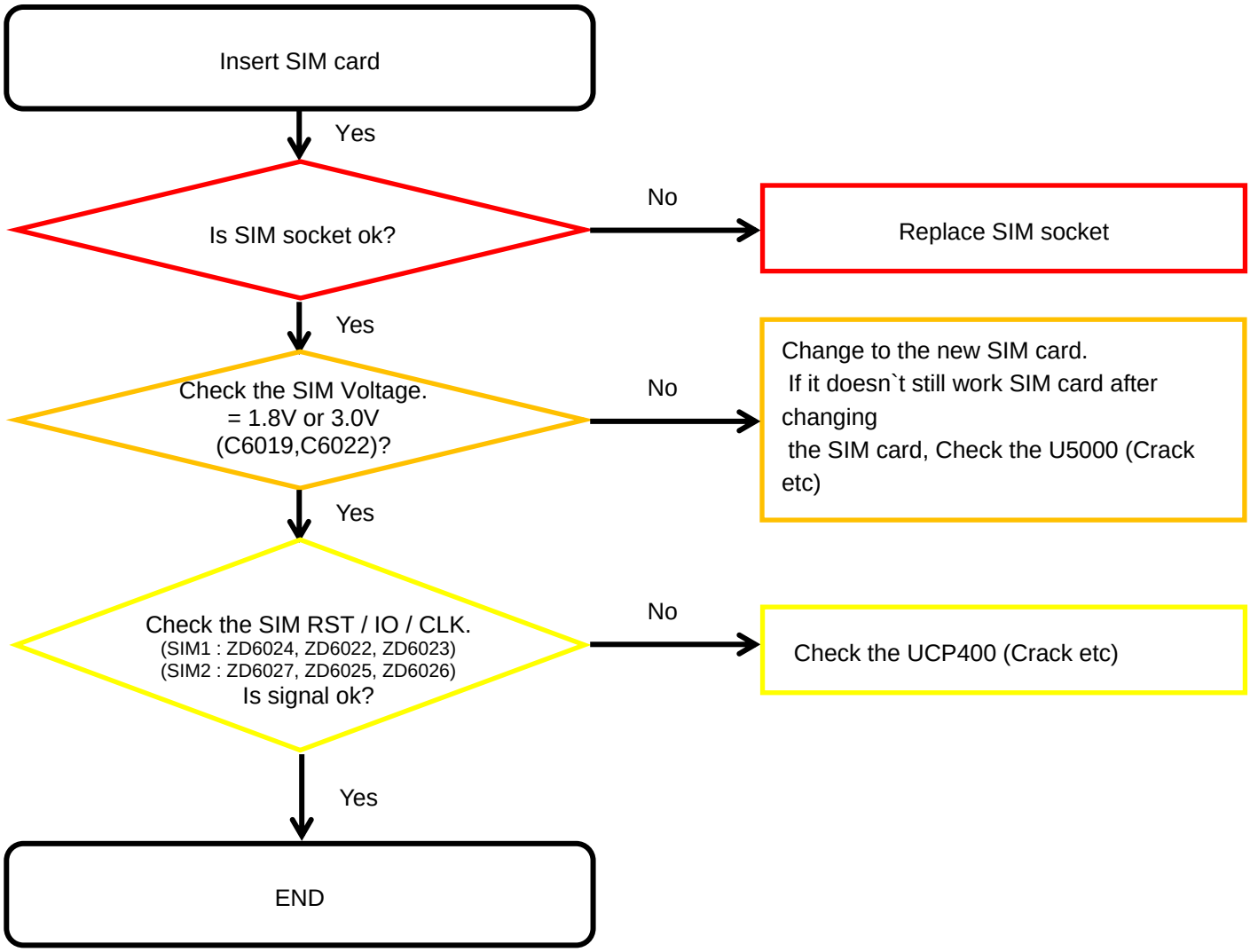
8-4-2. Initial



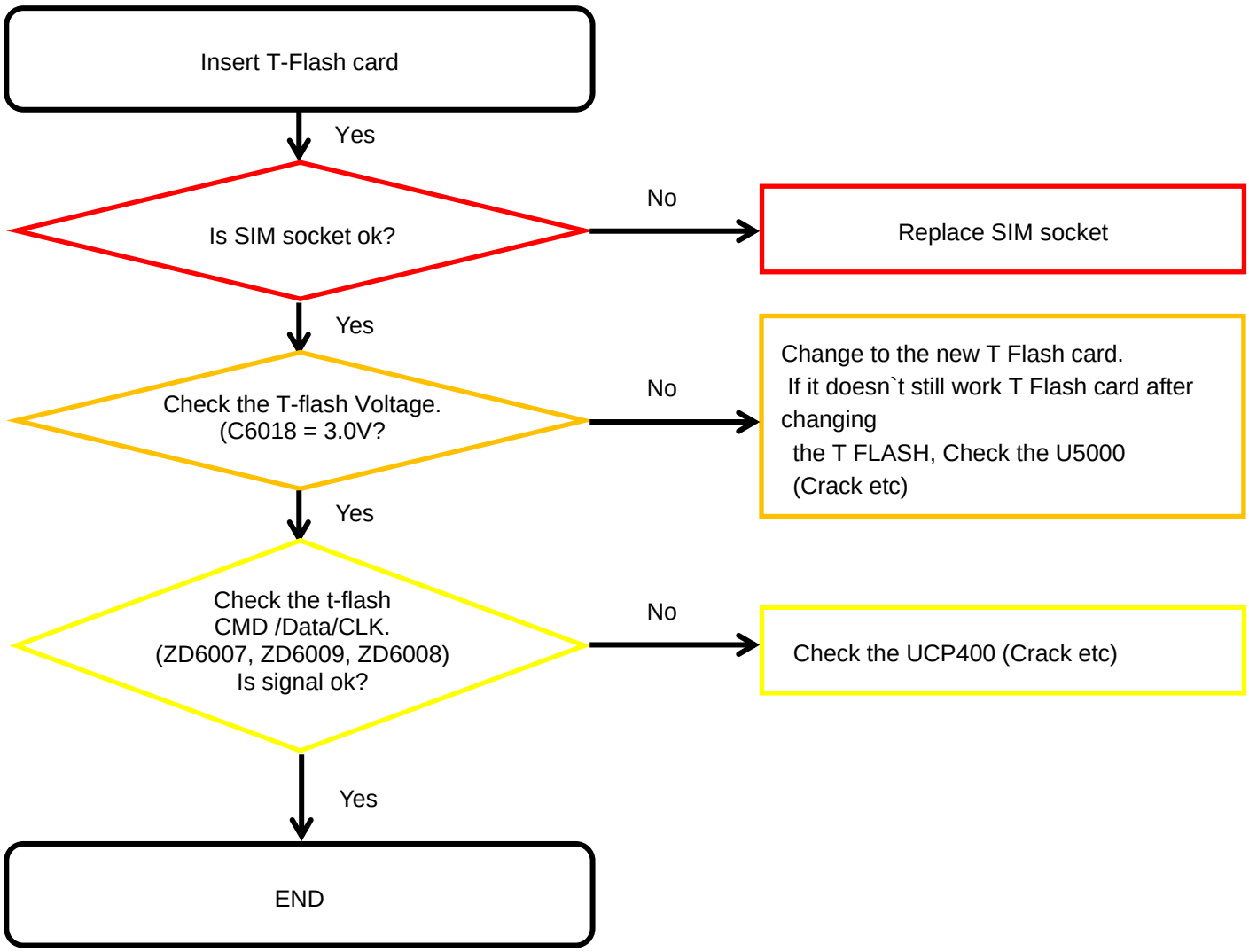
8-4-3. No Service



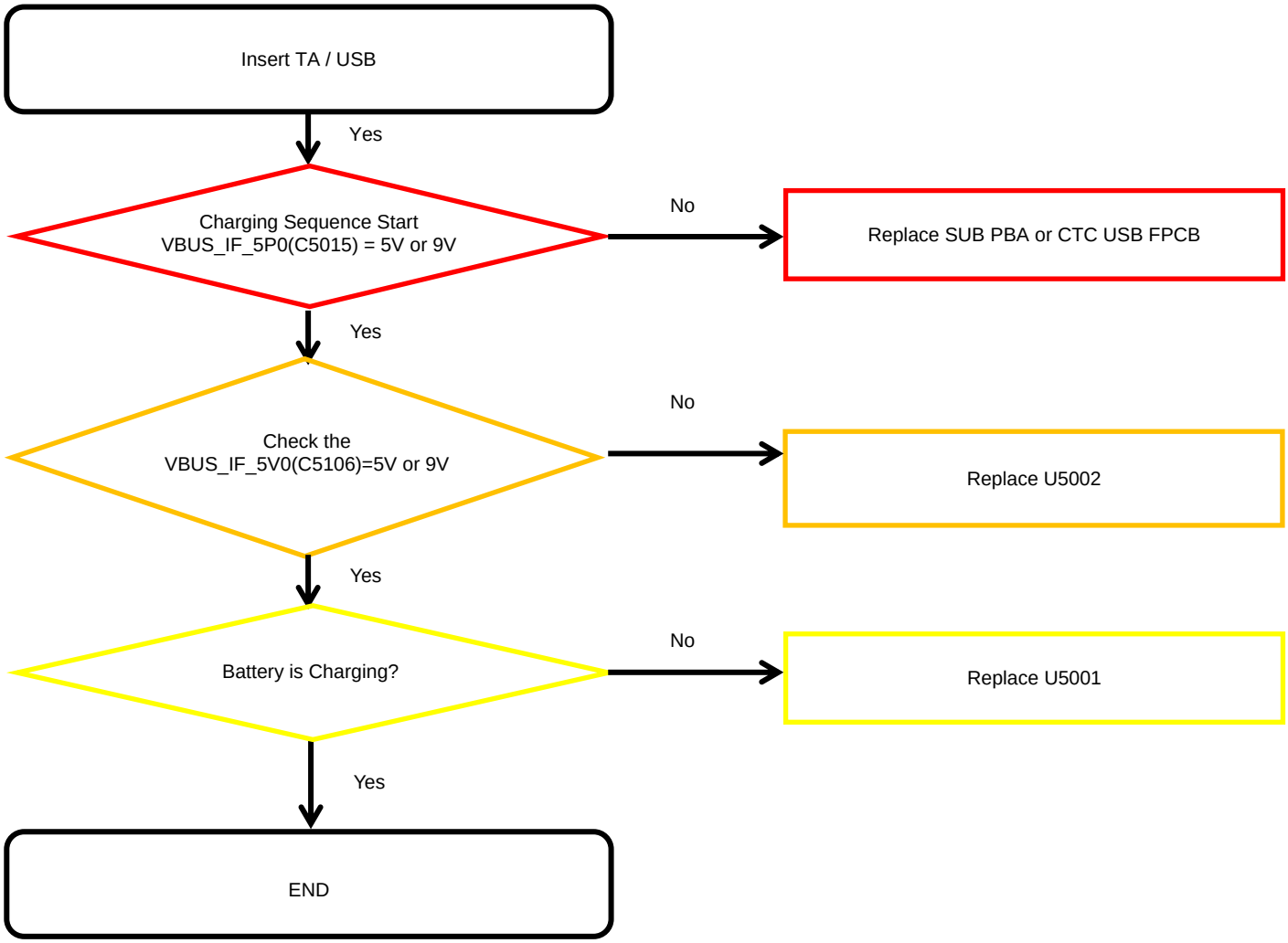
8-4-4. SIM Part



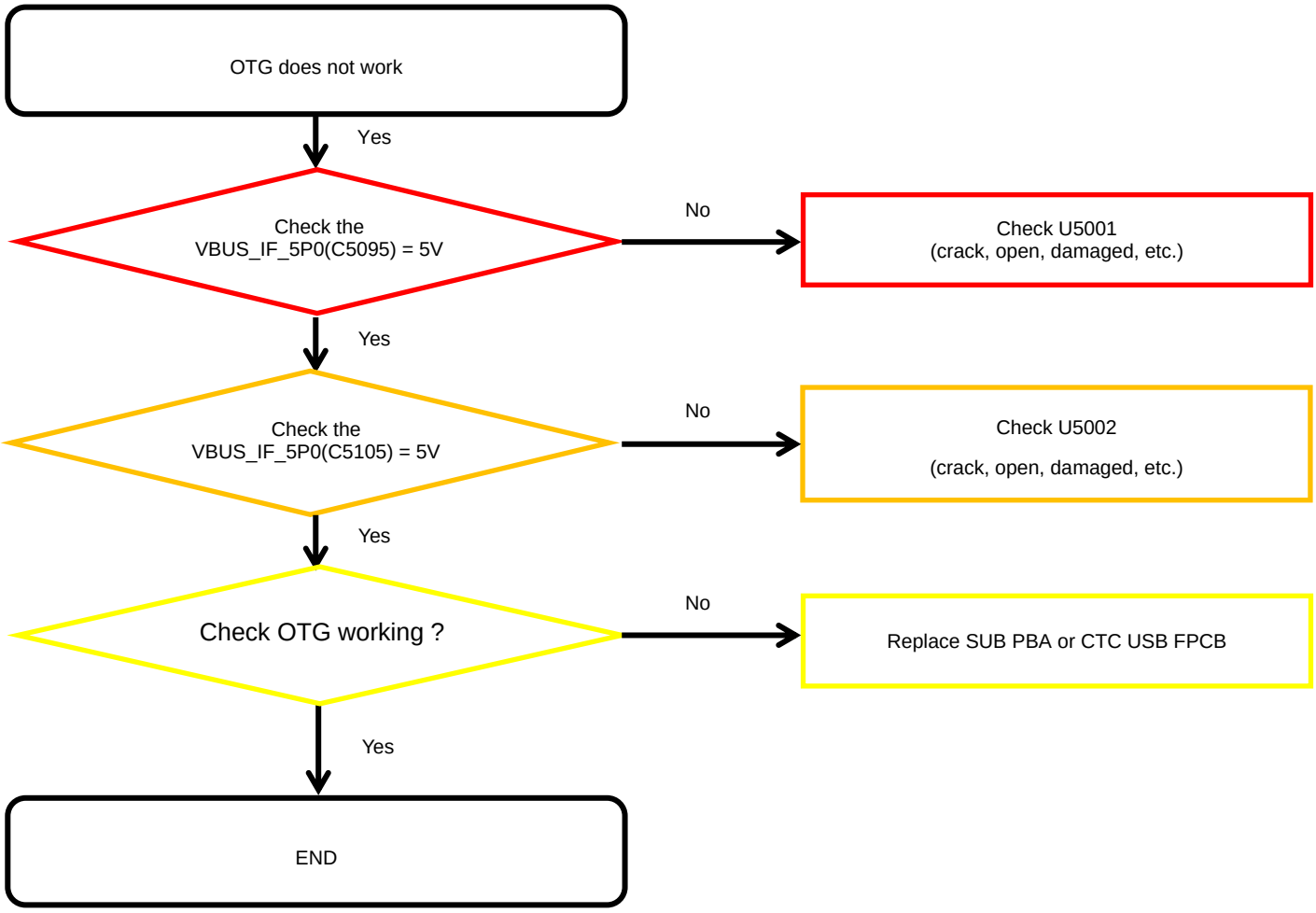
8-4-5. T-Flash Part



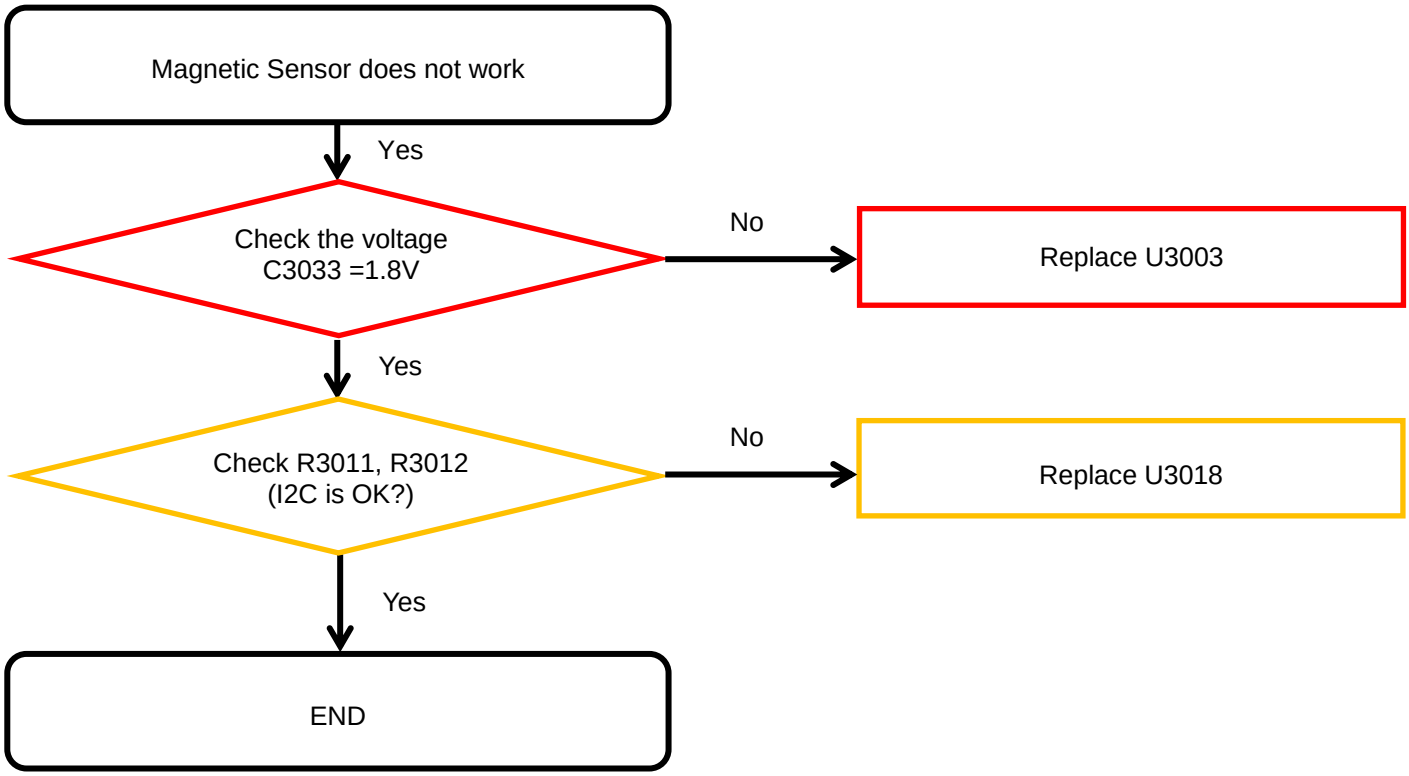
8-4-6. Cable Charging Part



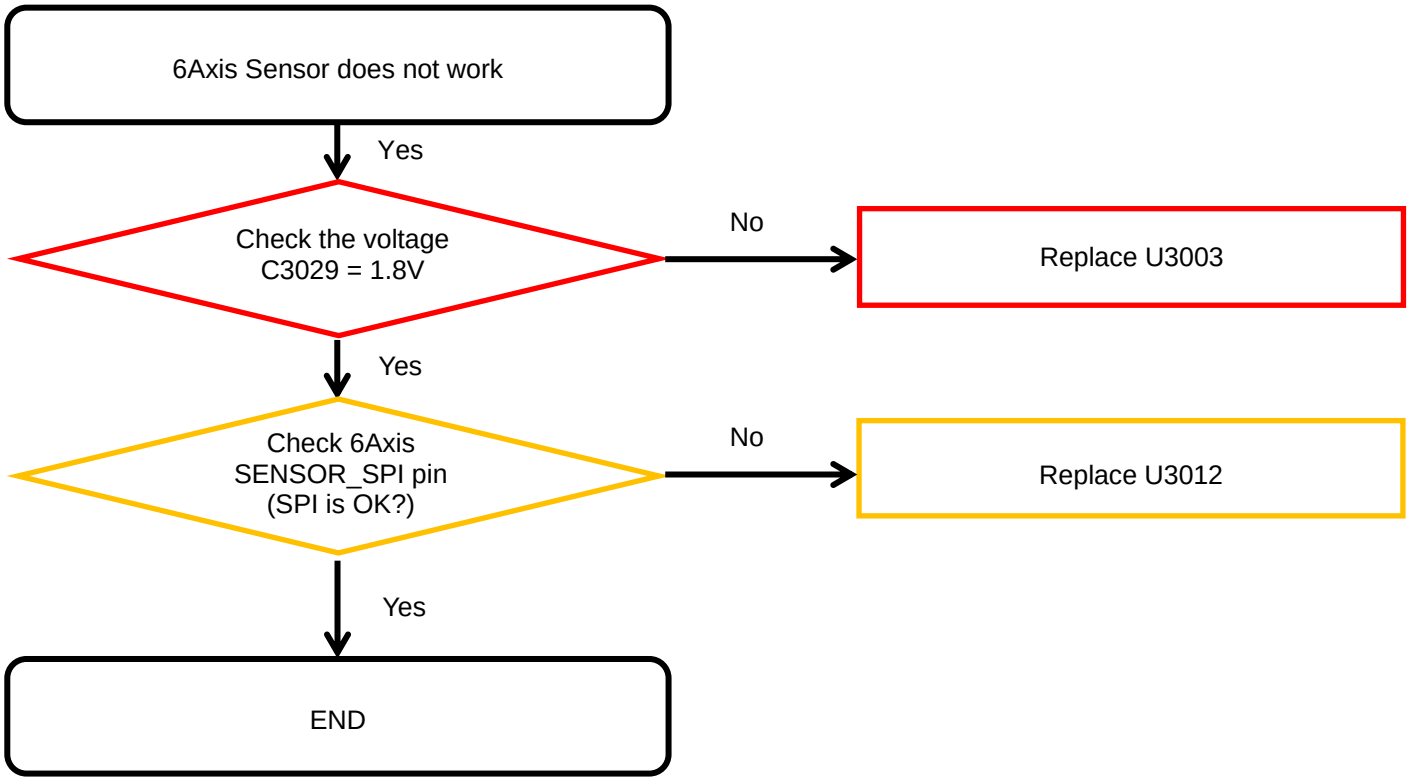
8-4-7. OTG



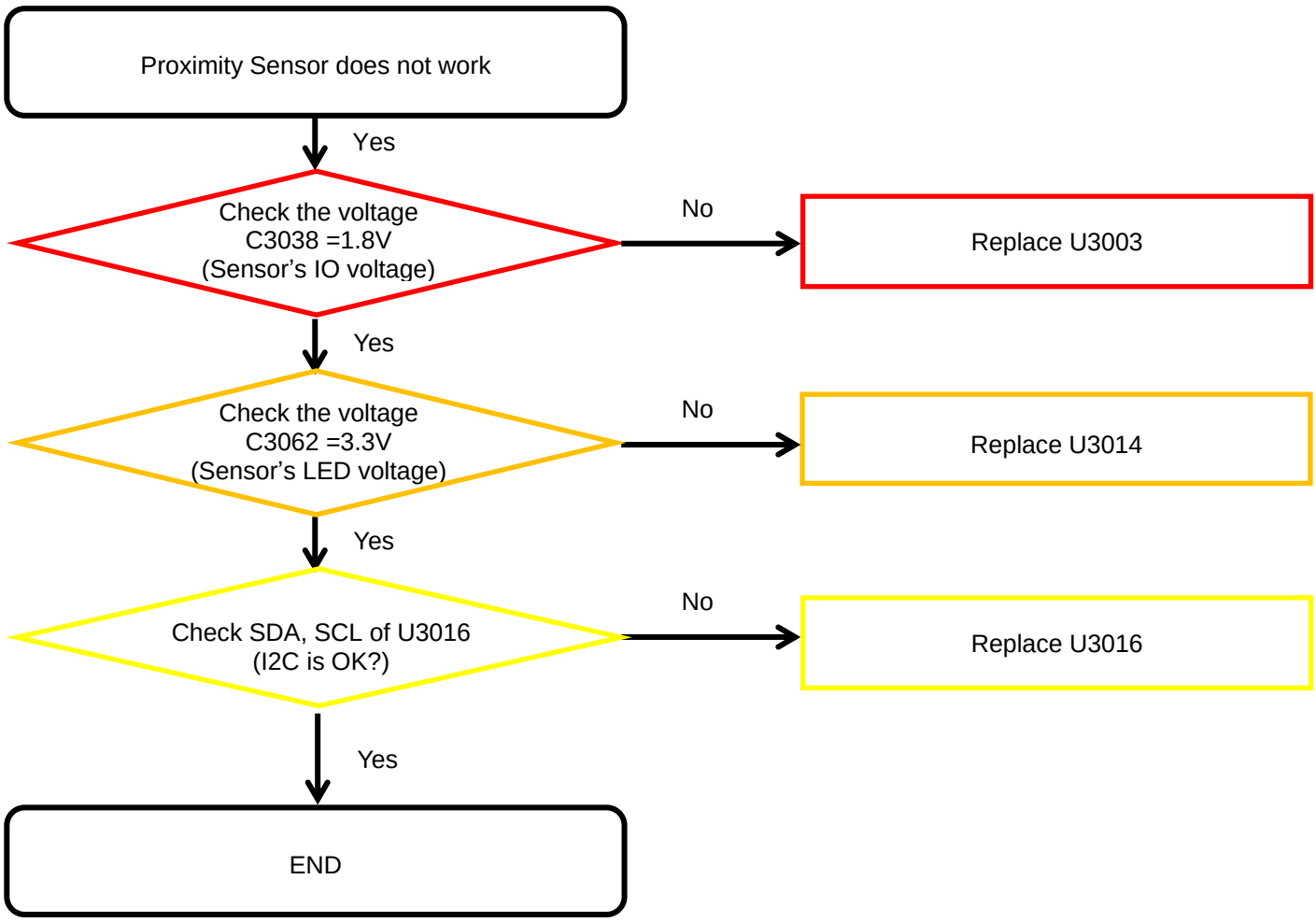
8-4-8-1. Magnetic Sensor



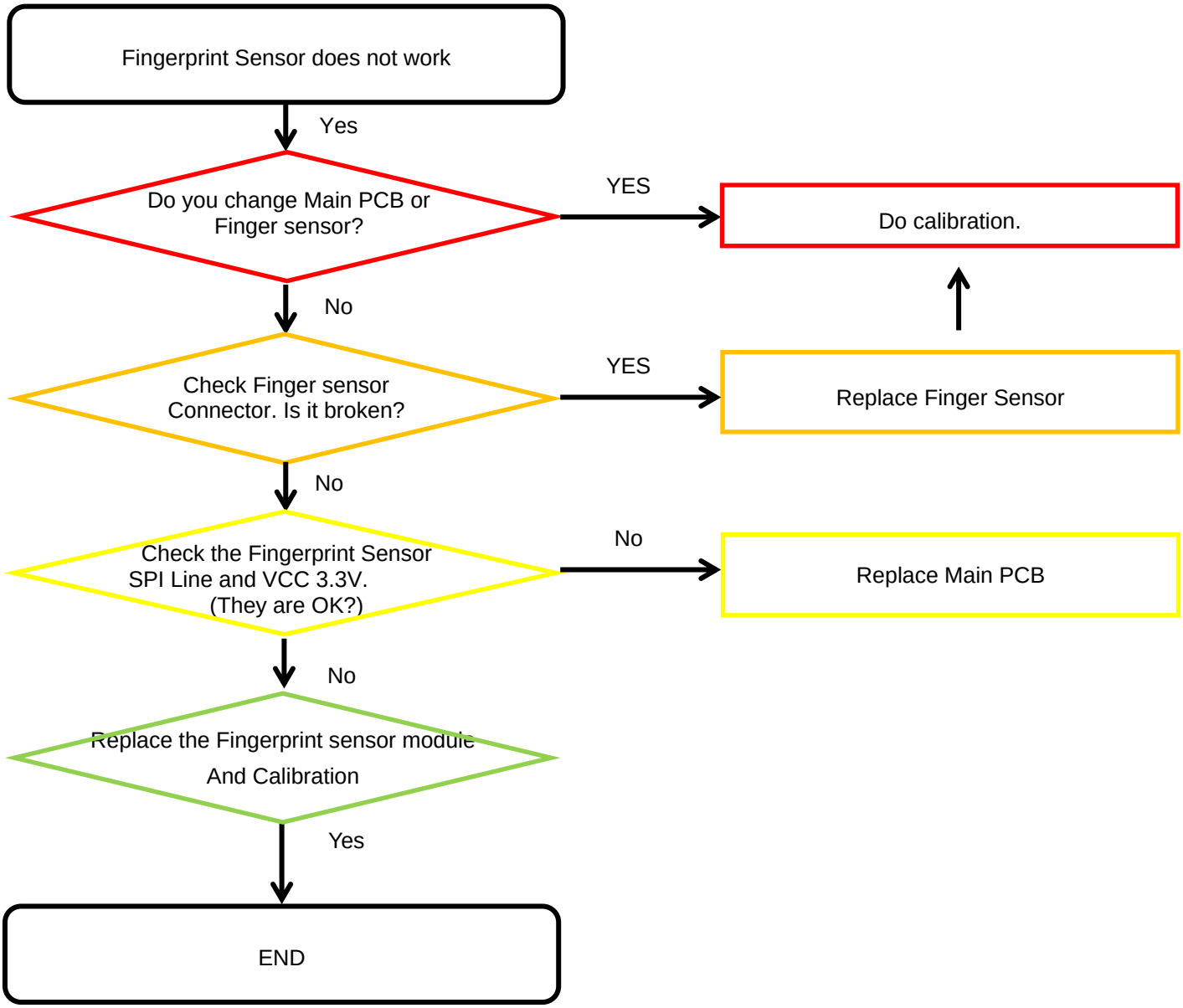
8-4-8-2. 6Axis Sensor



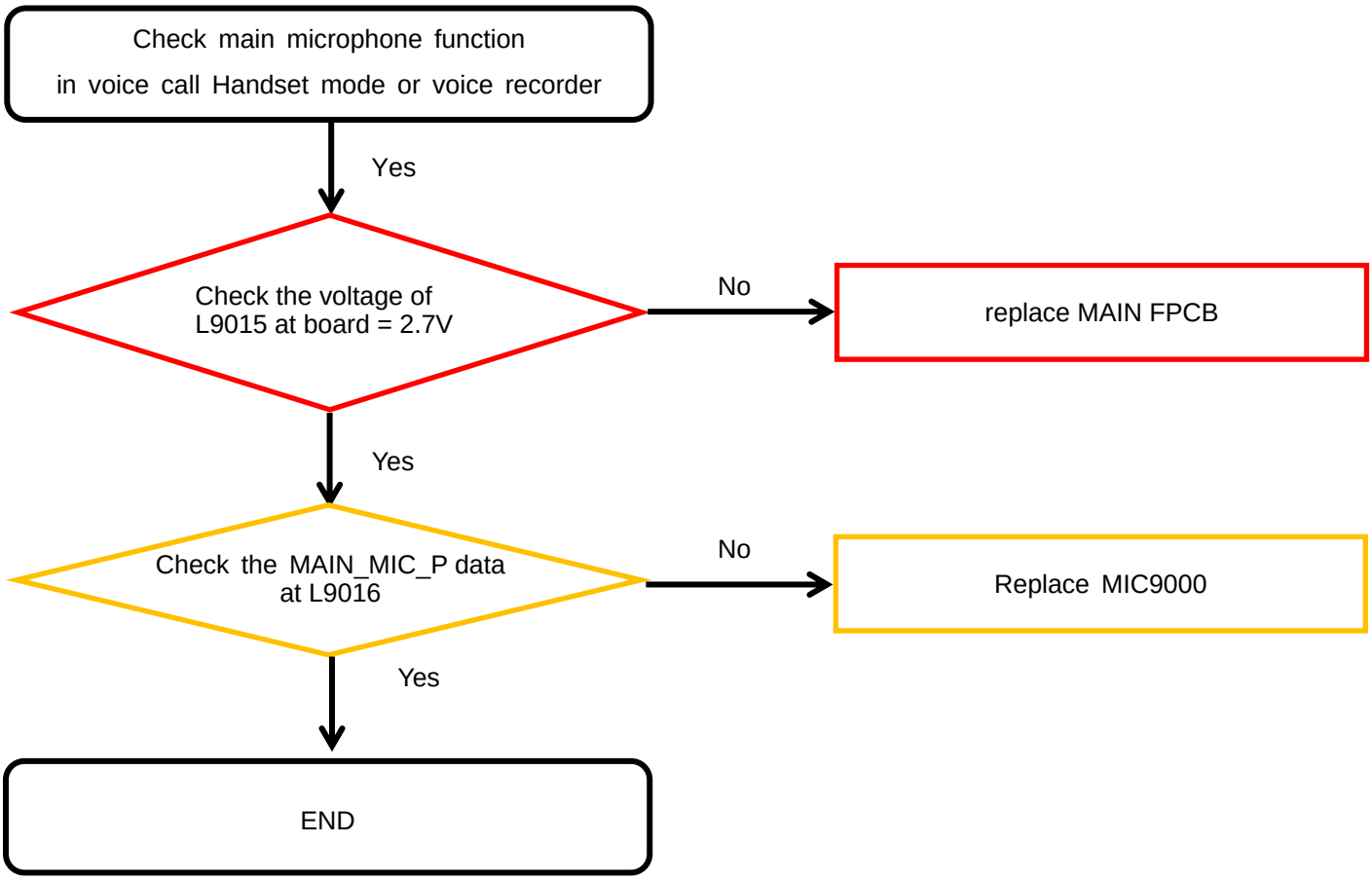
8-4-8-3. Proximity



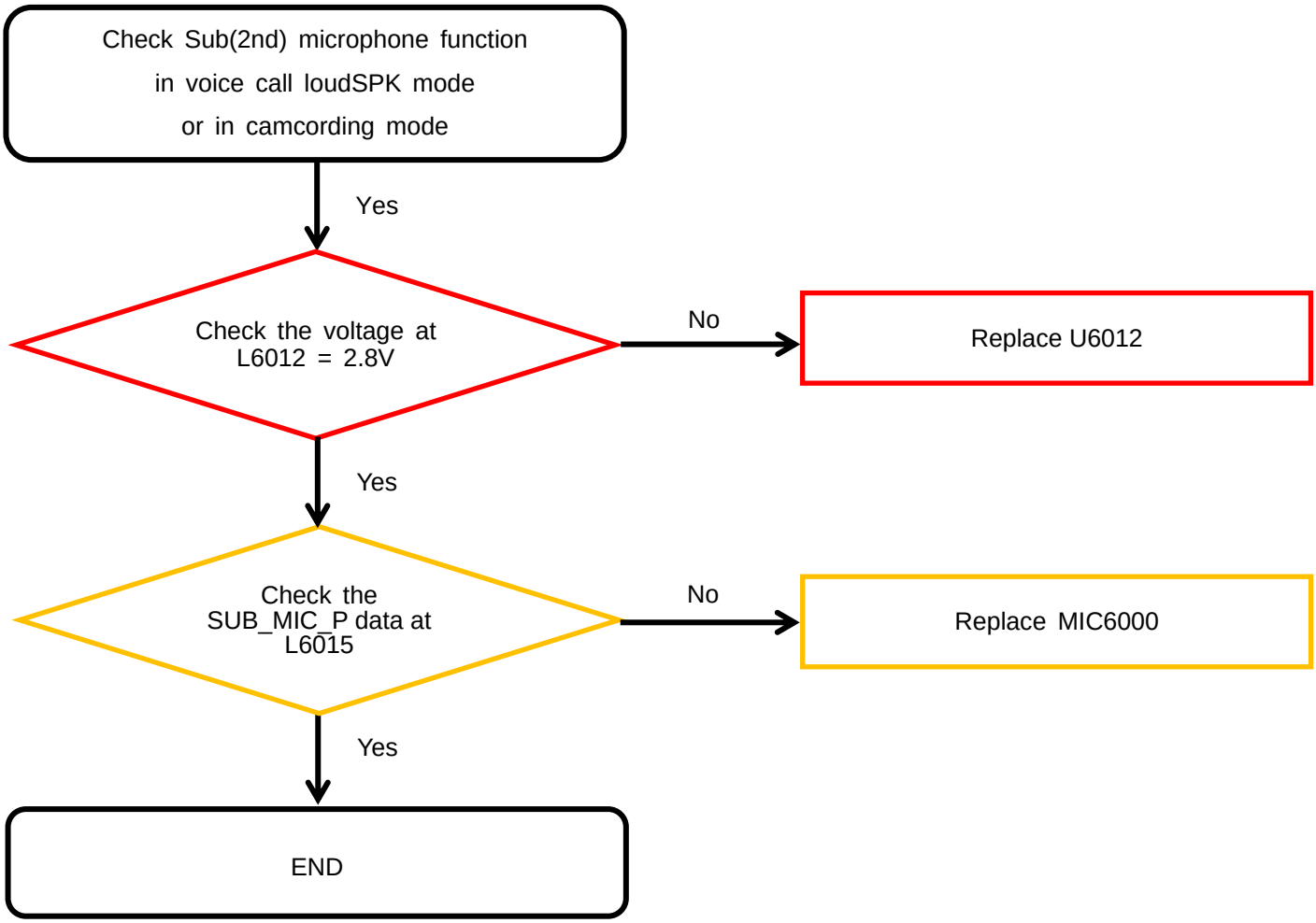
8-4-8-4. Fingerprint Sensor



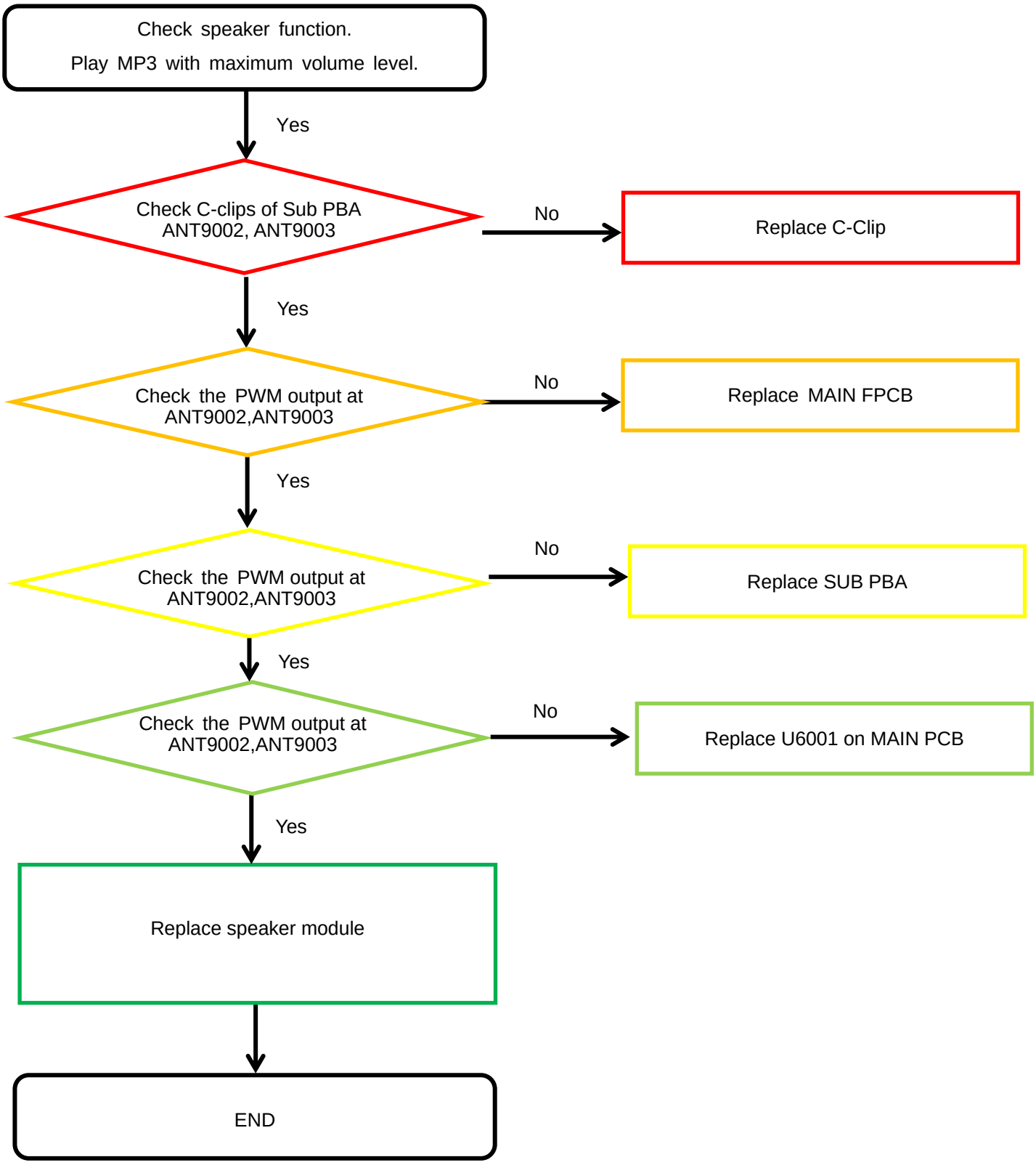
8-4-9-1. Microphone Part - Main MIC



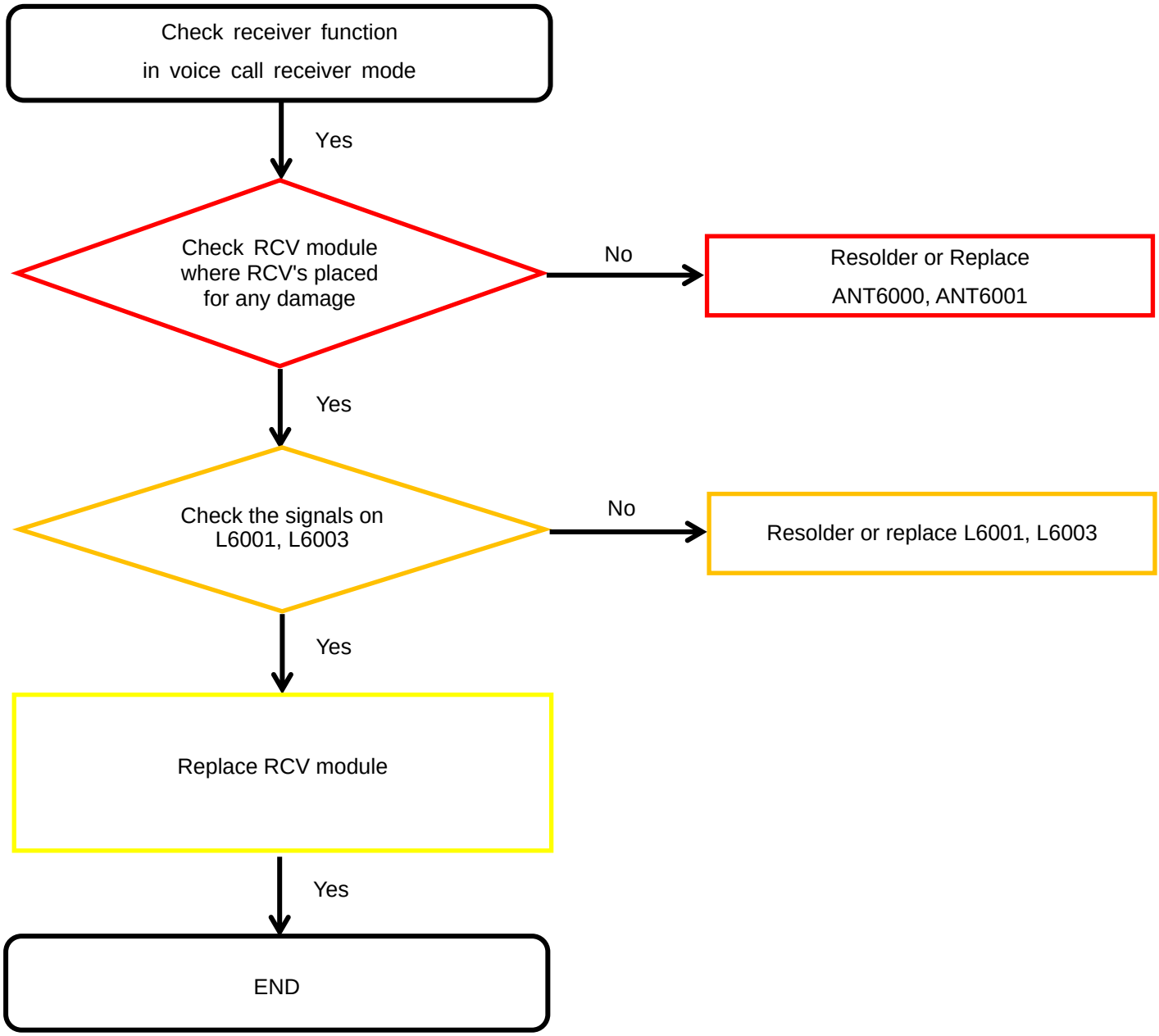
8-4-9-2. Microphone Part - Sub(2nd) MIC



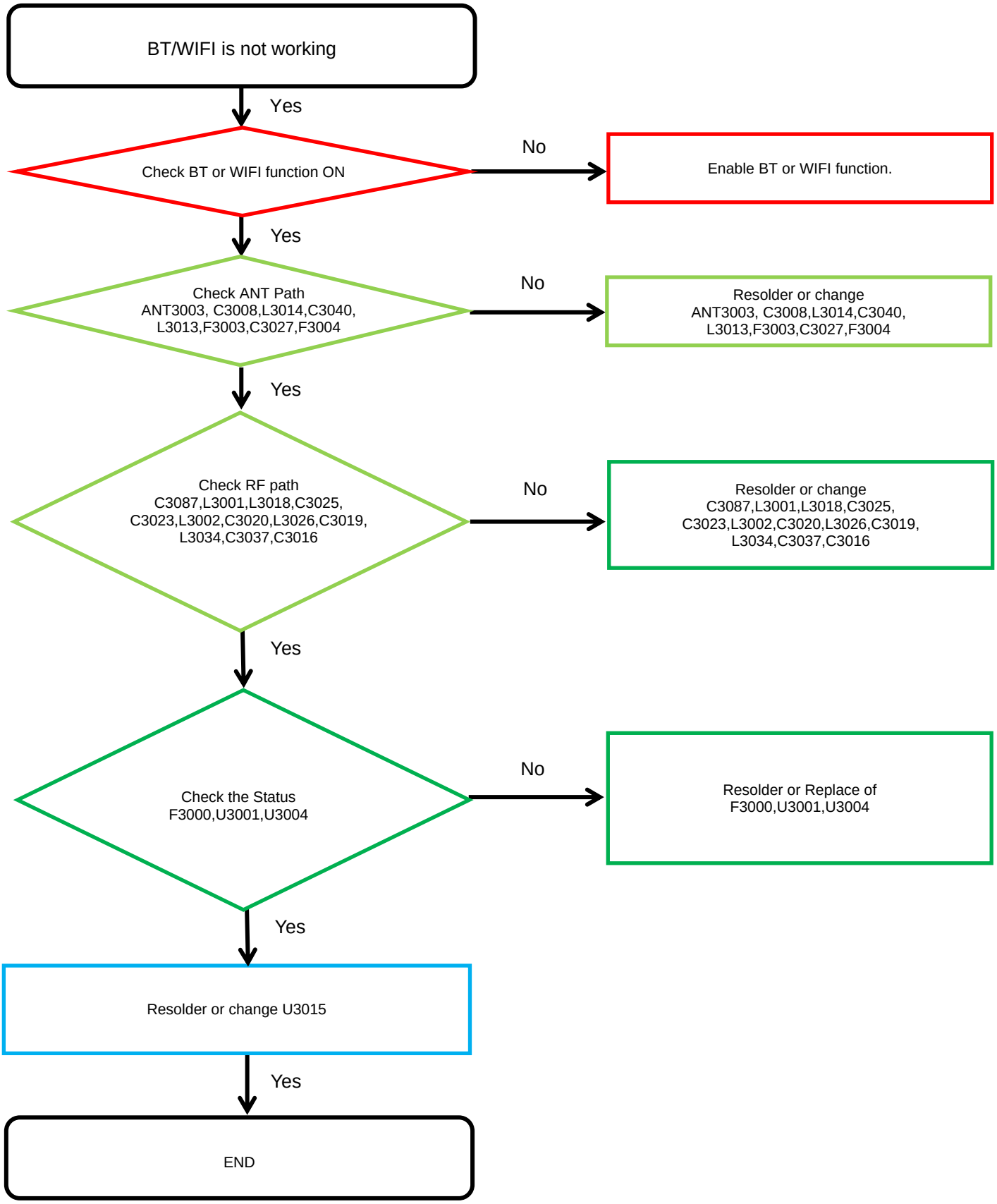
8-4-10. Speaker Part



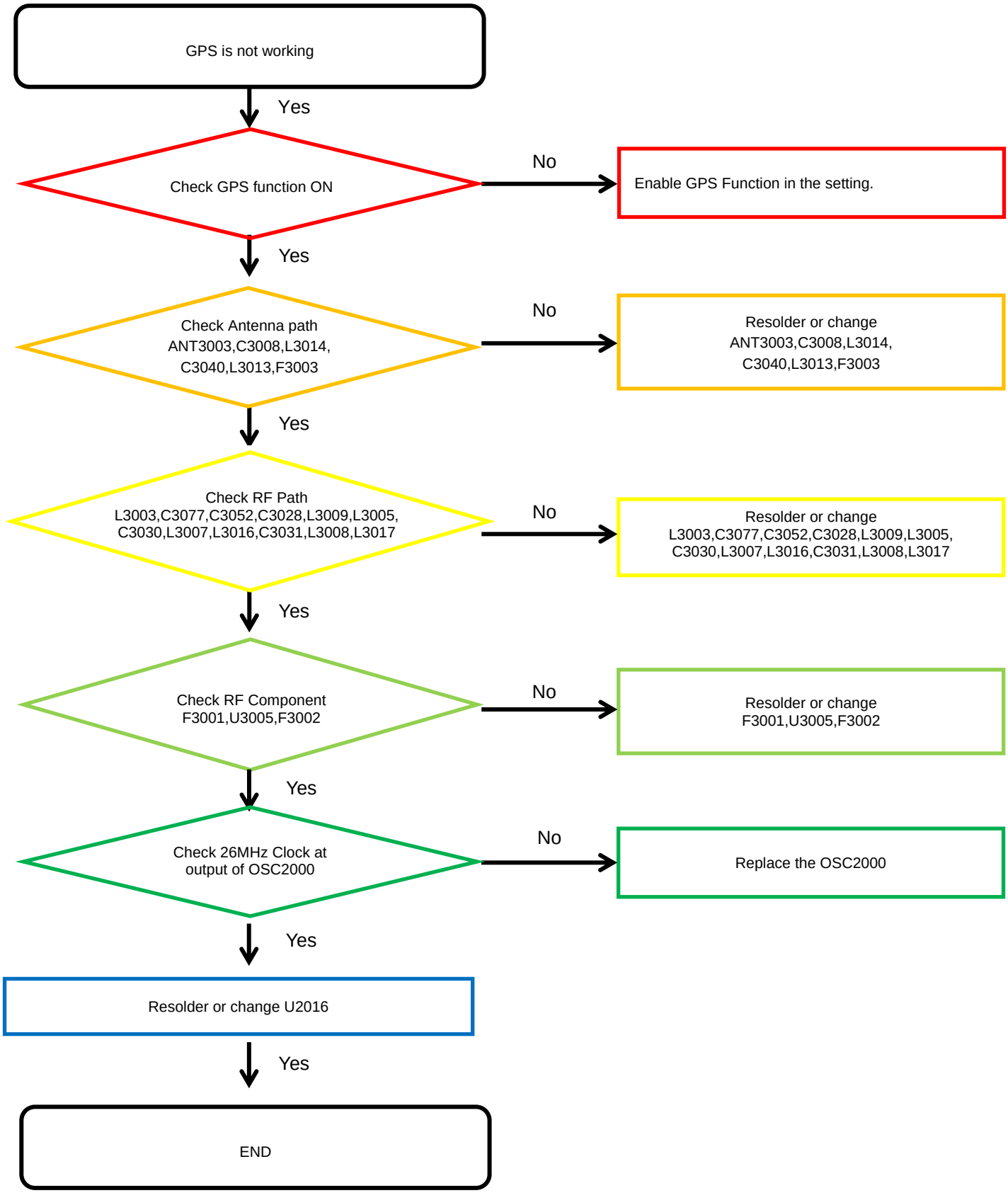
8-4-11. Receiver Part



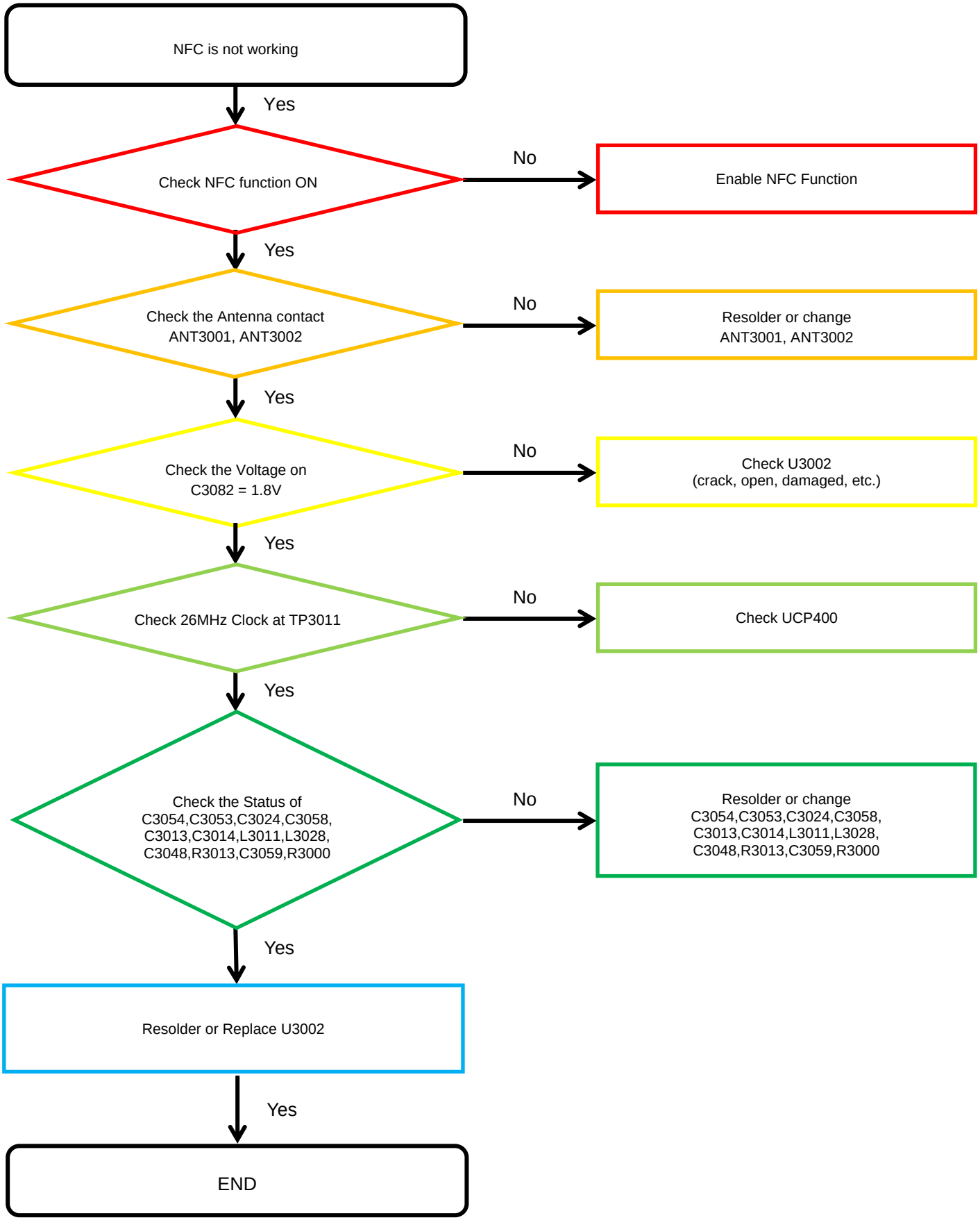
8-4-12. BT/WIFI



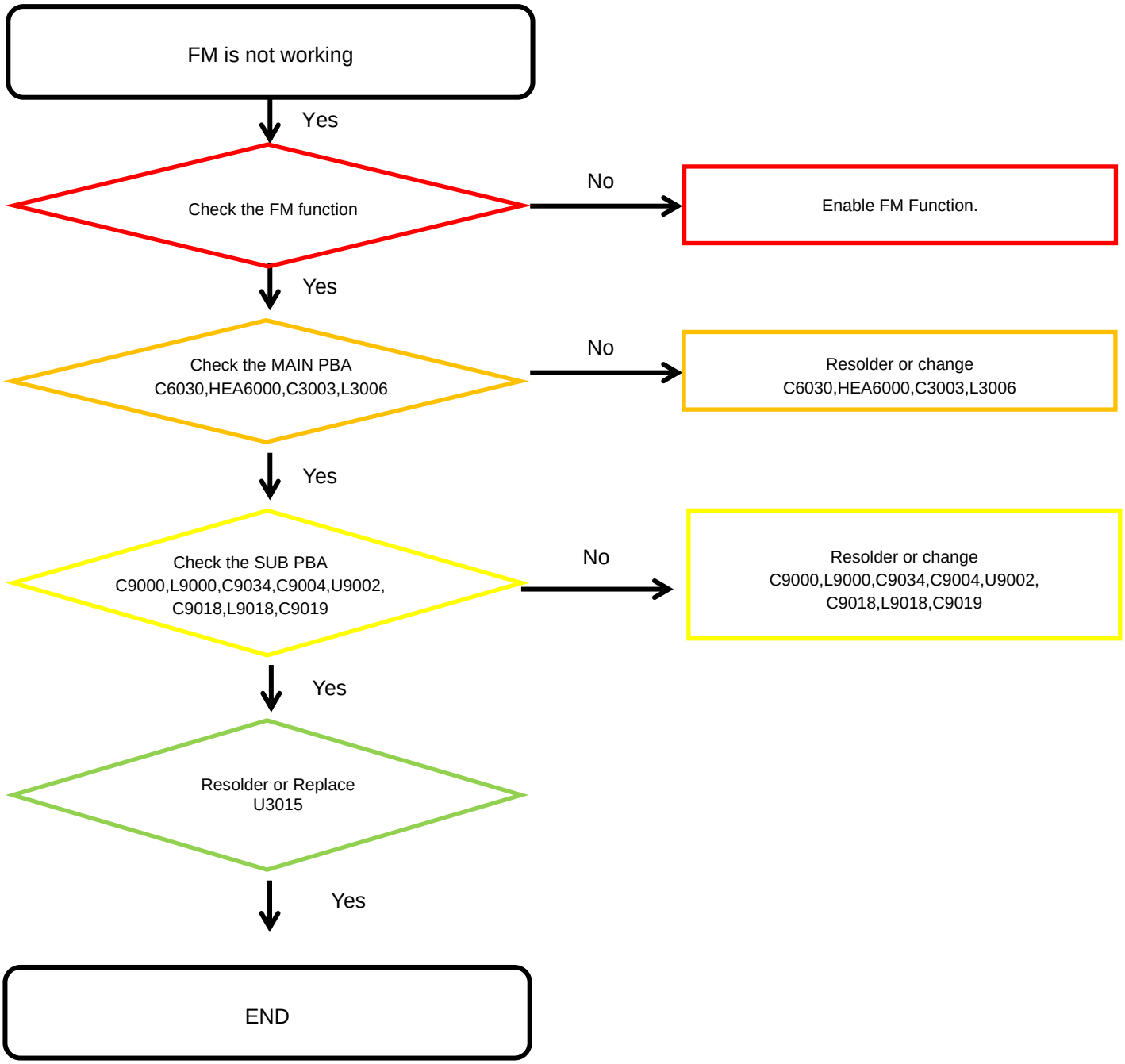
8-4-13. GPS



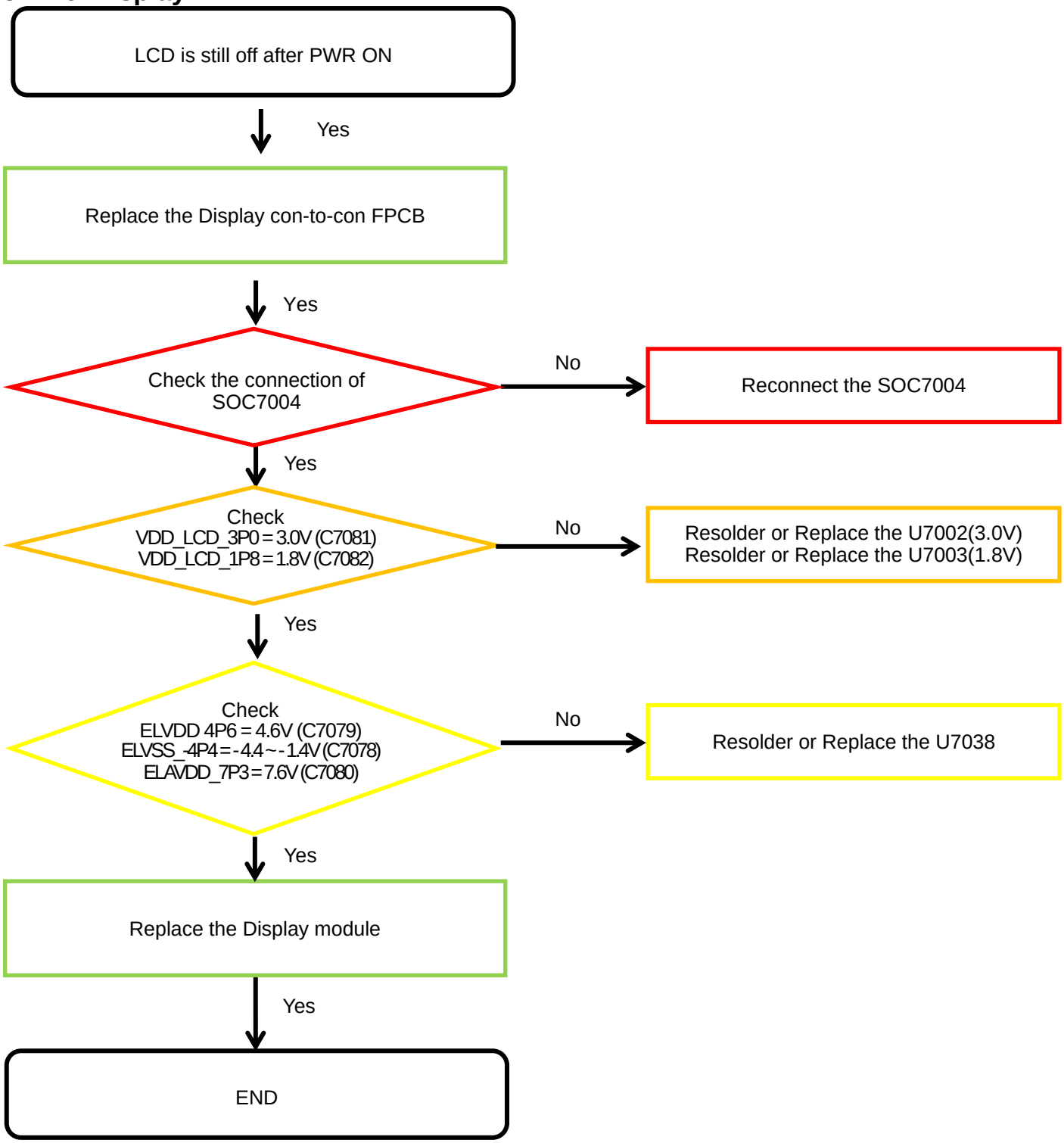
8-4-14. NFC [SM-M307FN]



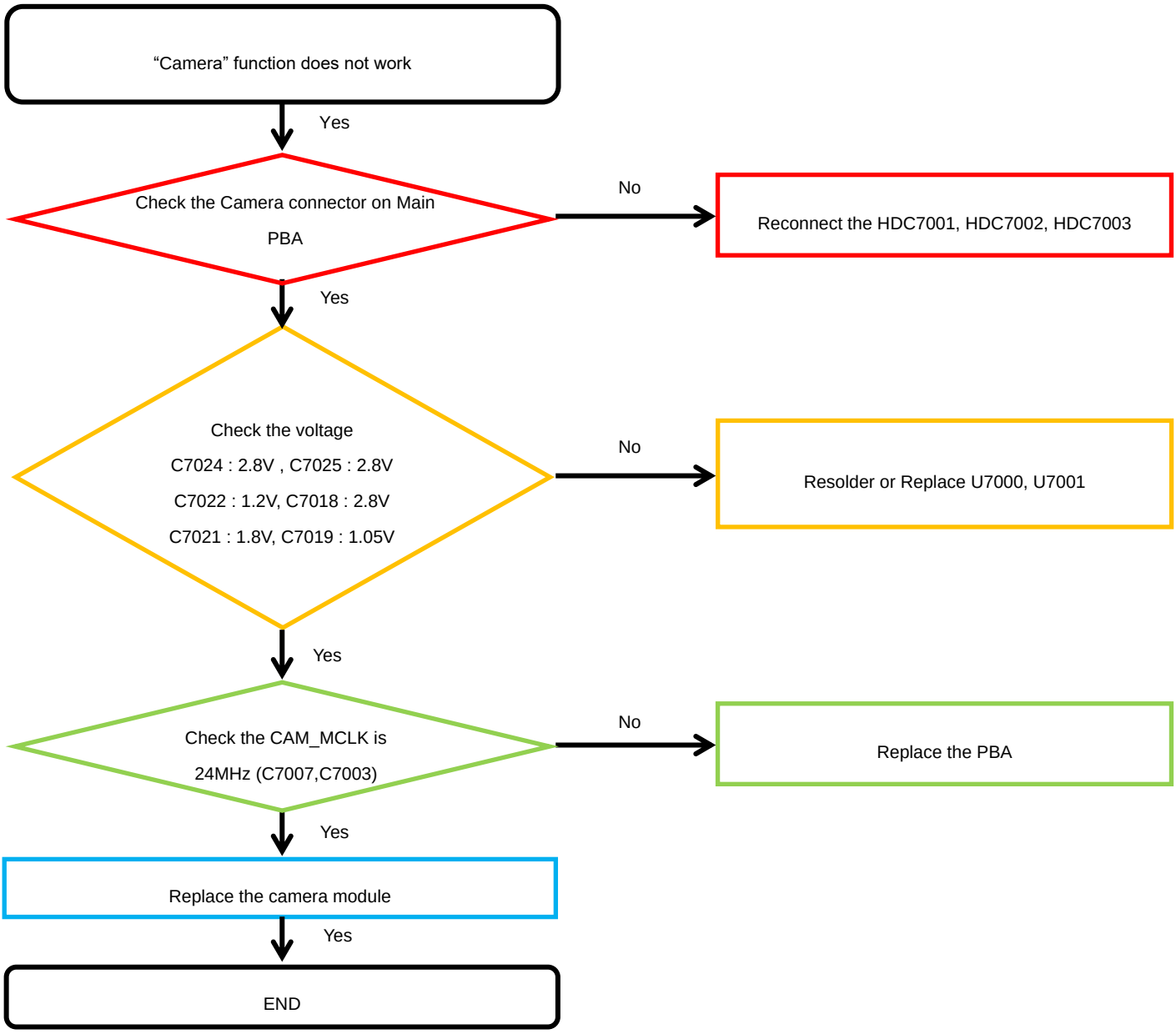
8-4-15. FM radio part



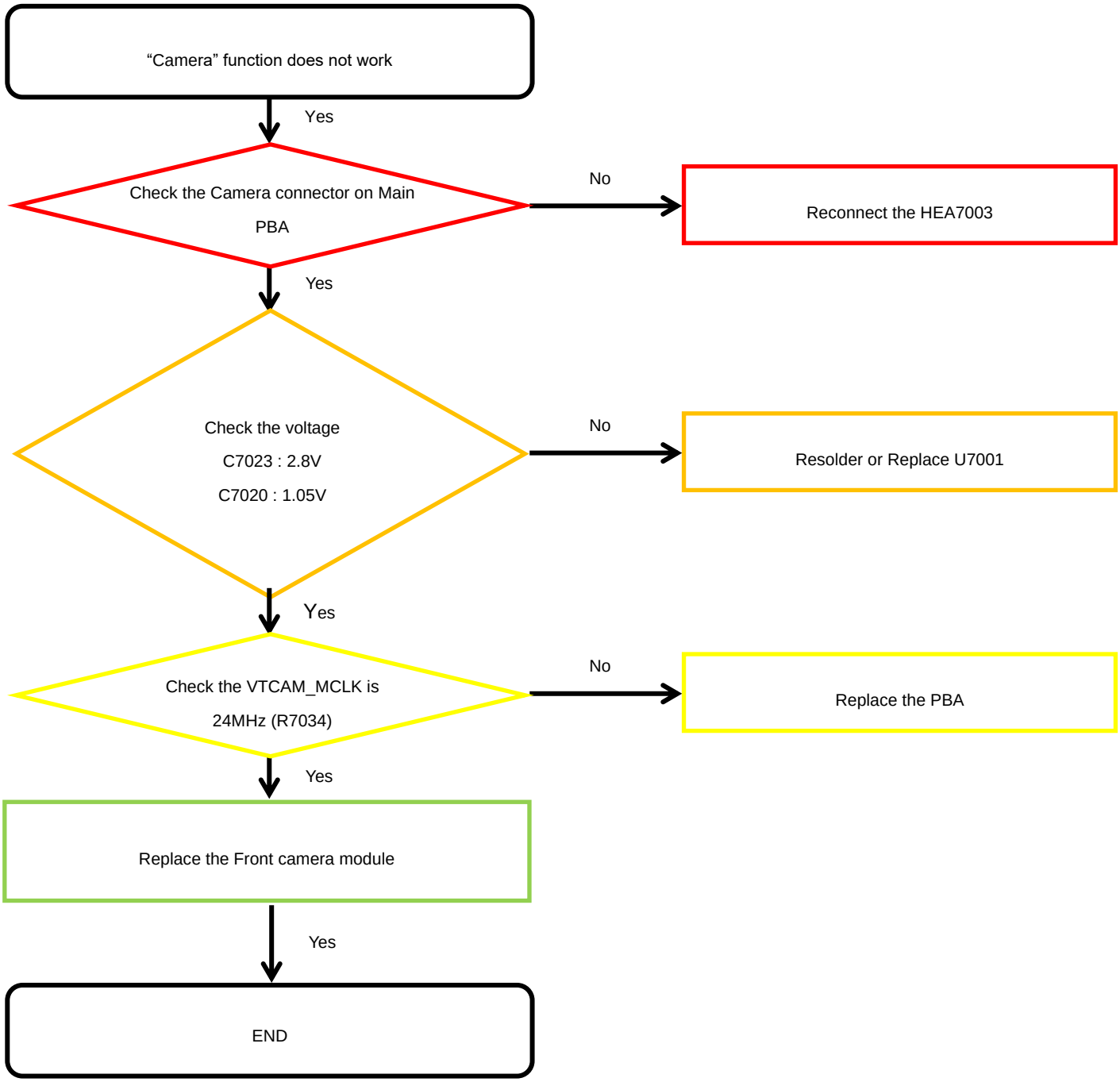
8-4-16. Display



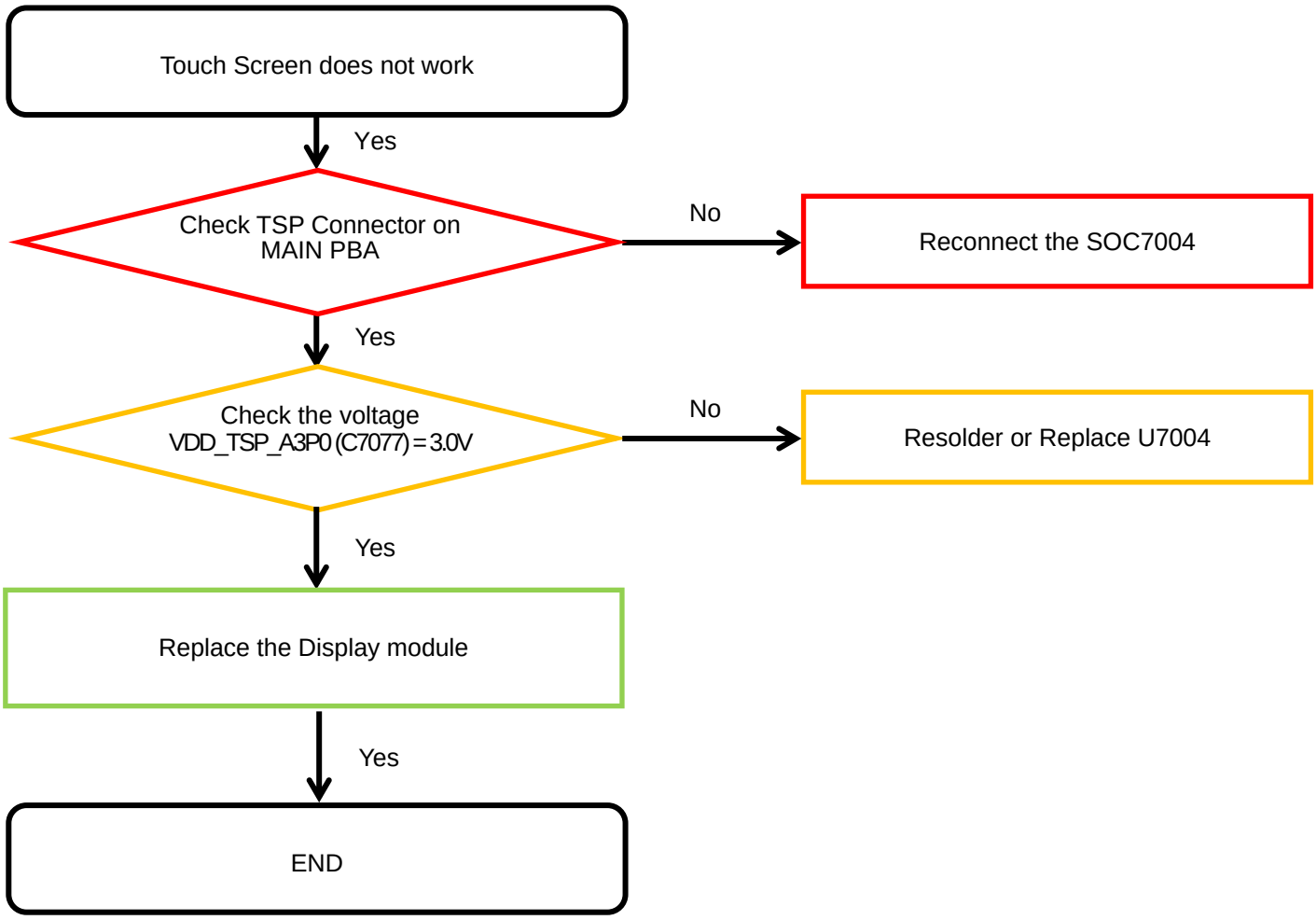
8-4-17. Triple Camera



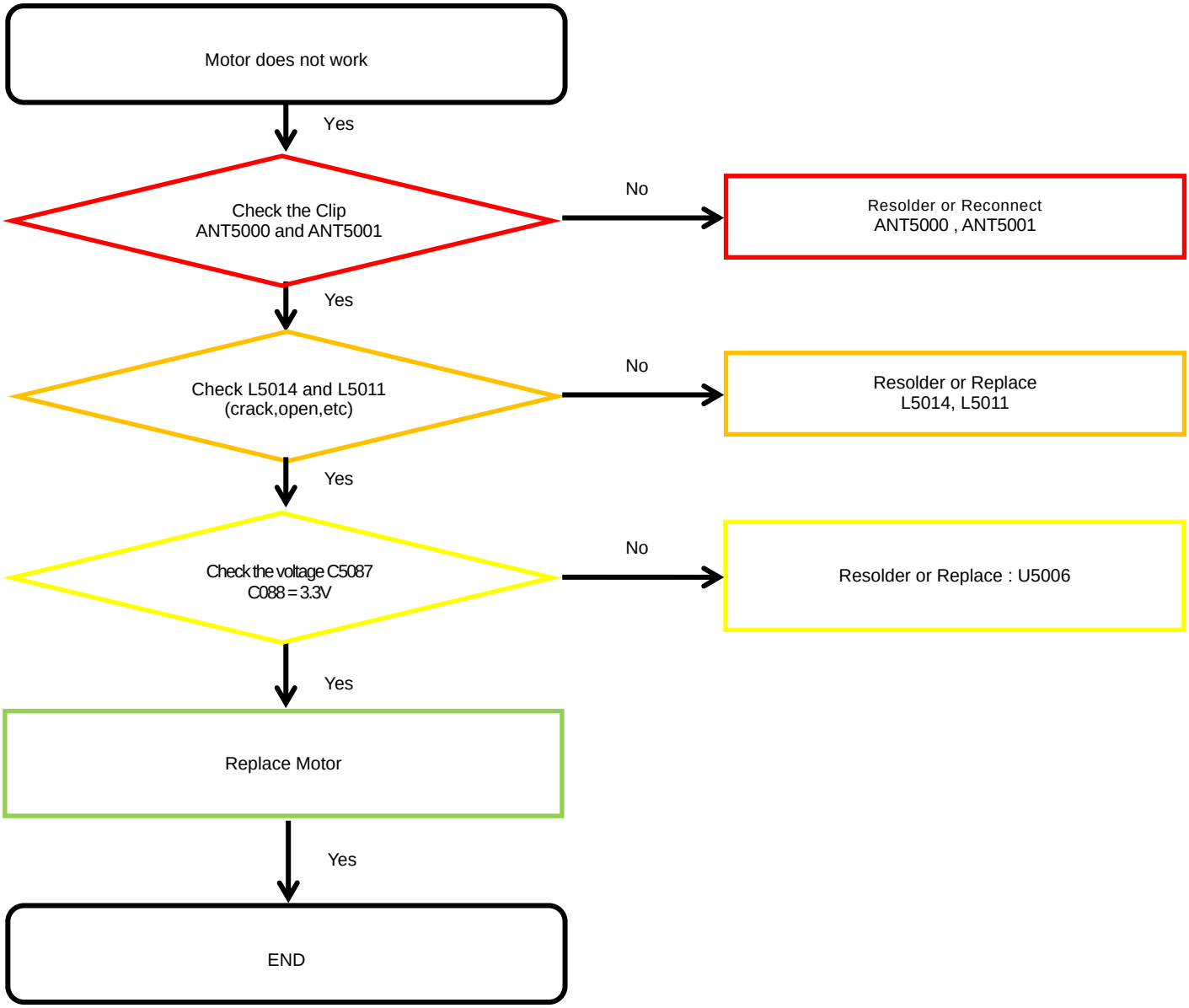
8-4-18. VT CAMERA



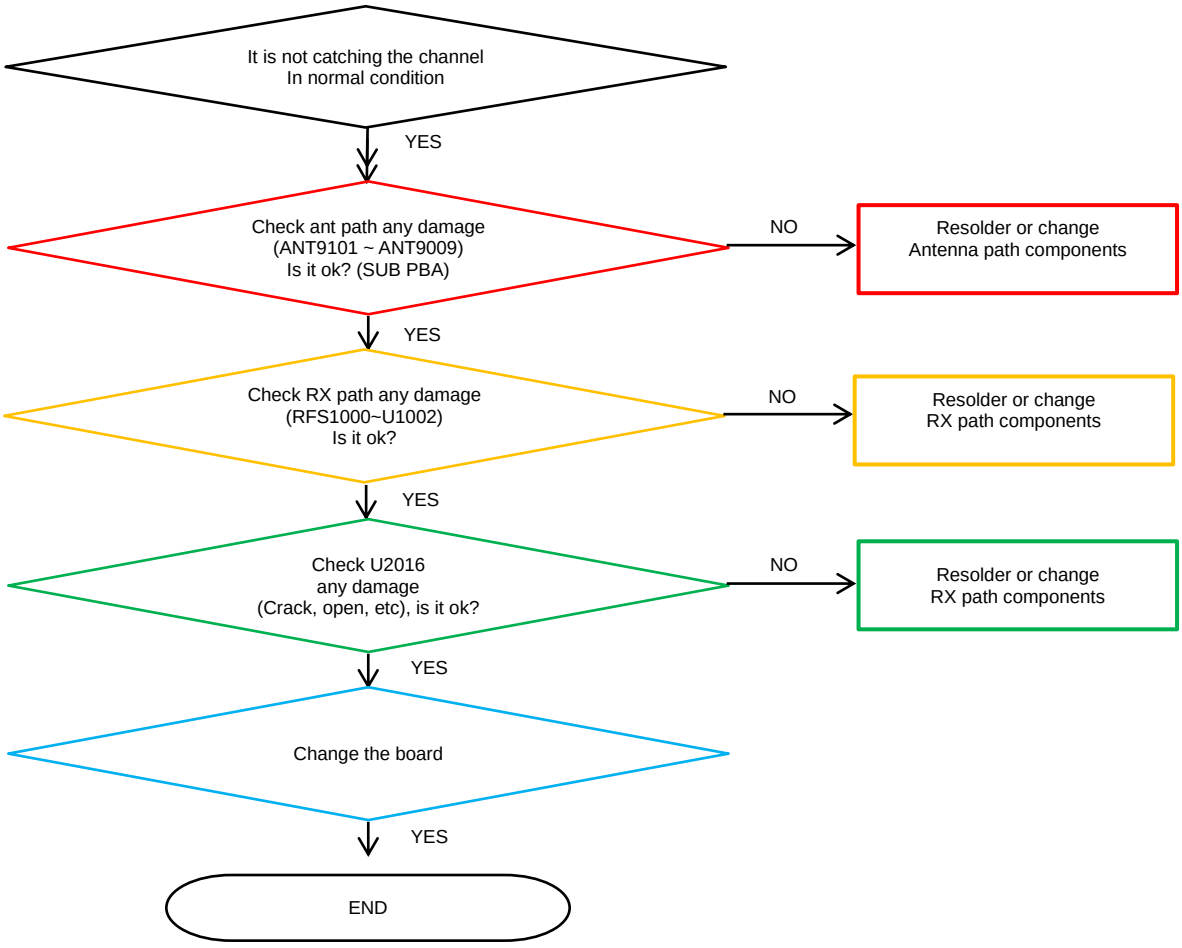
8-4-19. TSP



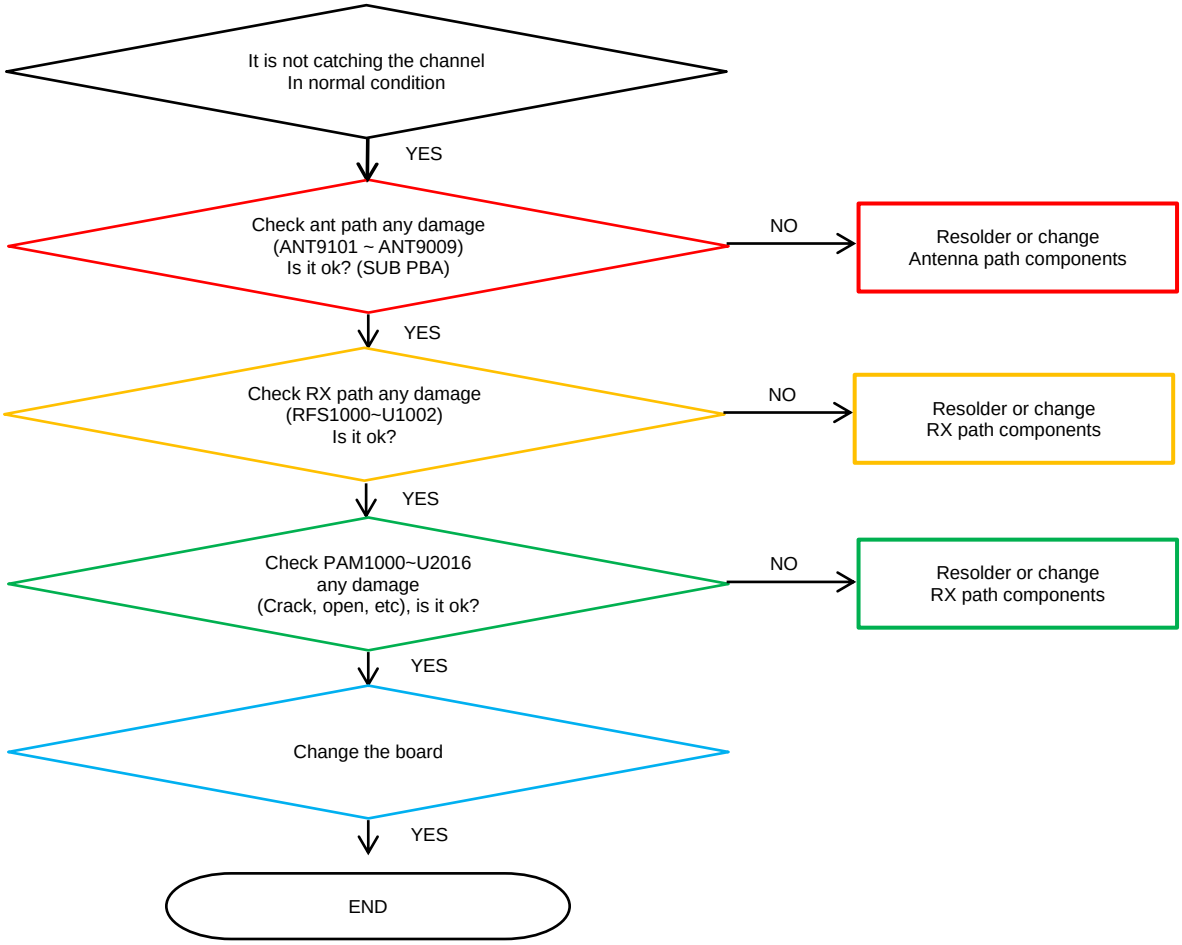
8-4-20. Motor



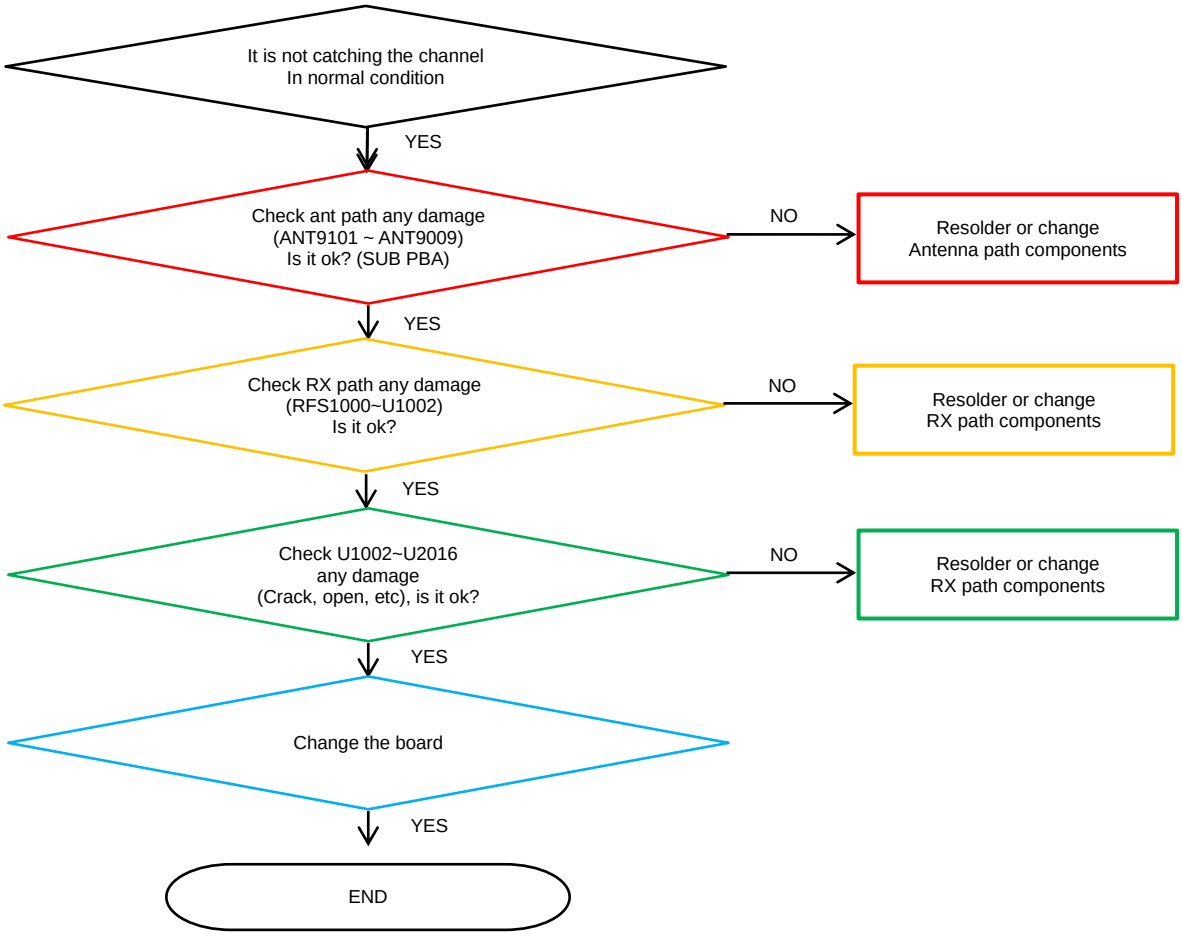
8-4-21. GSM 850/900, WCDMA B5/8, LTE B5/8/20 PRx



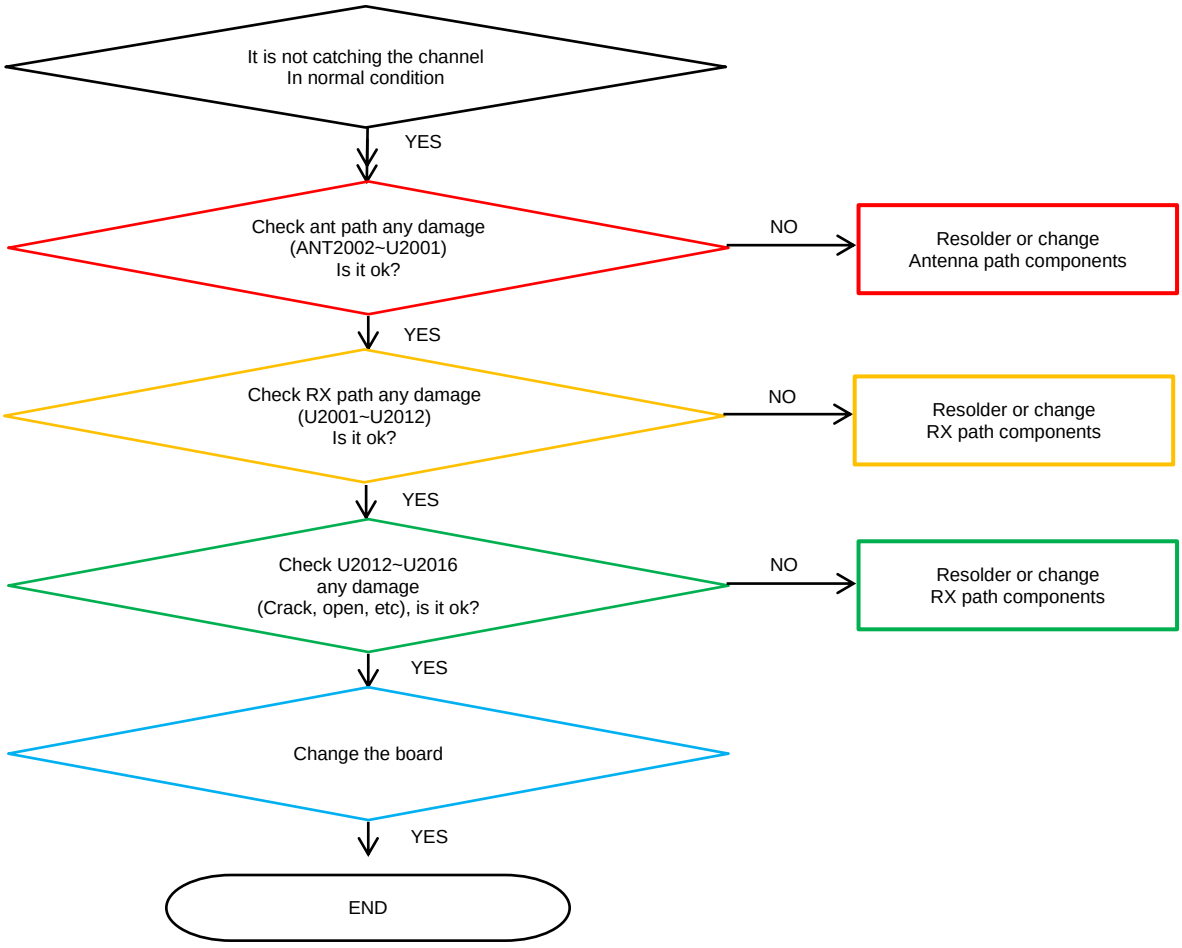
8-4-22. LTE B7/38/40/41 PRx



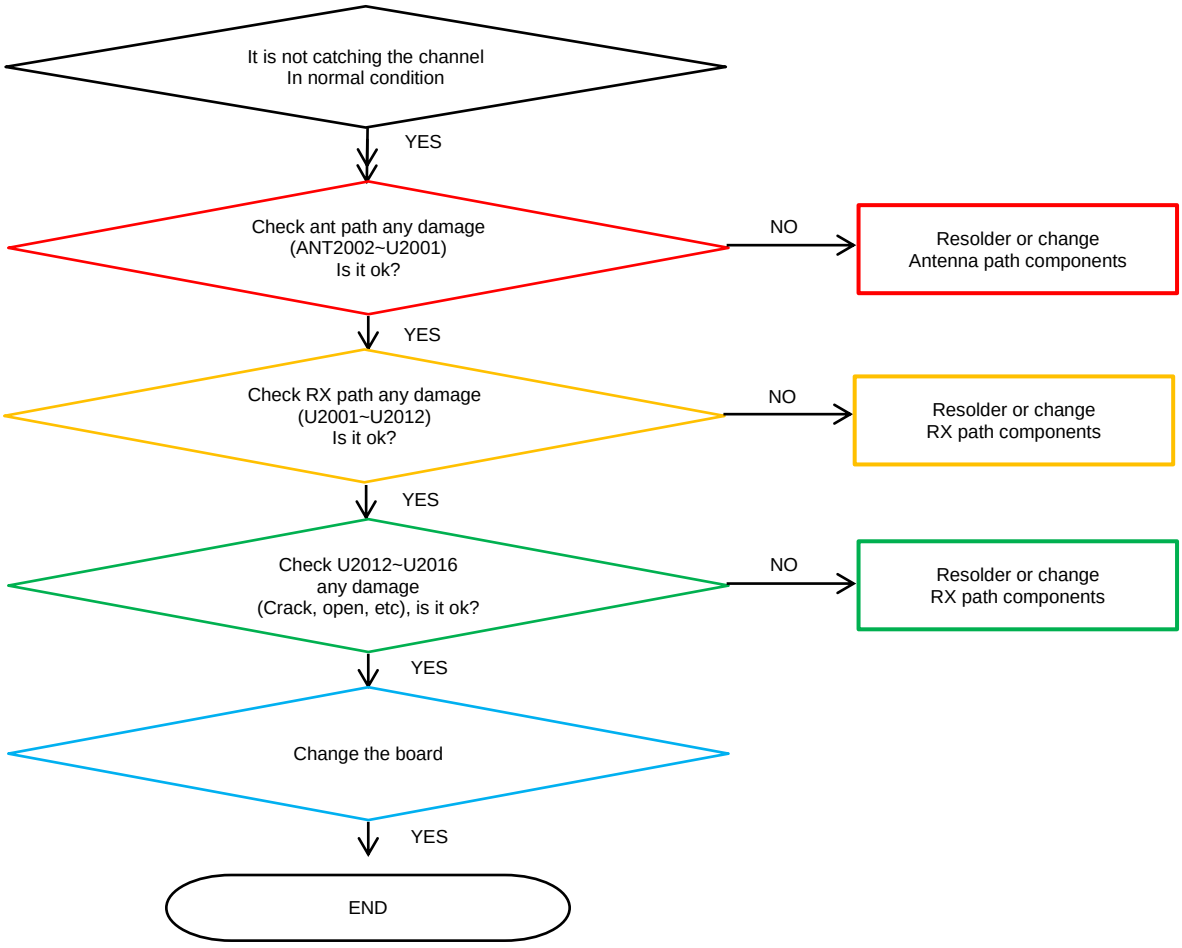
8-4-23. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 PRx



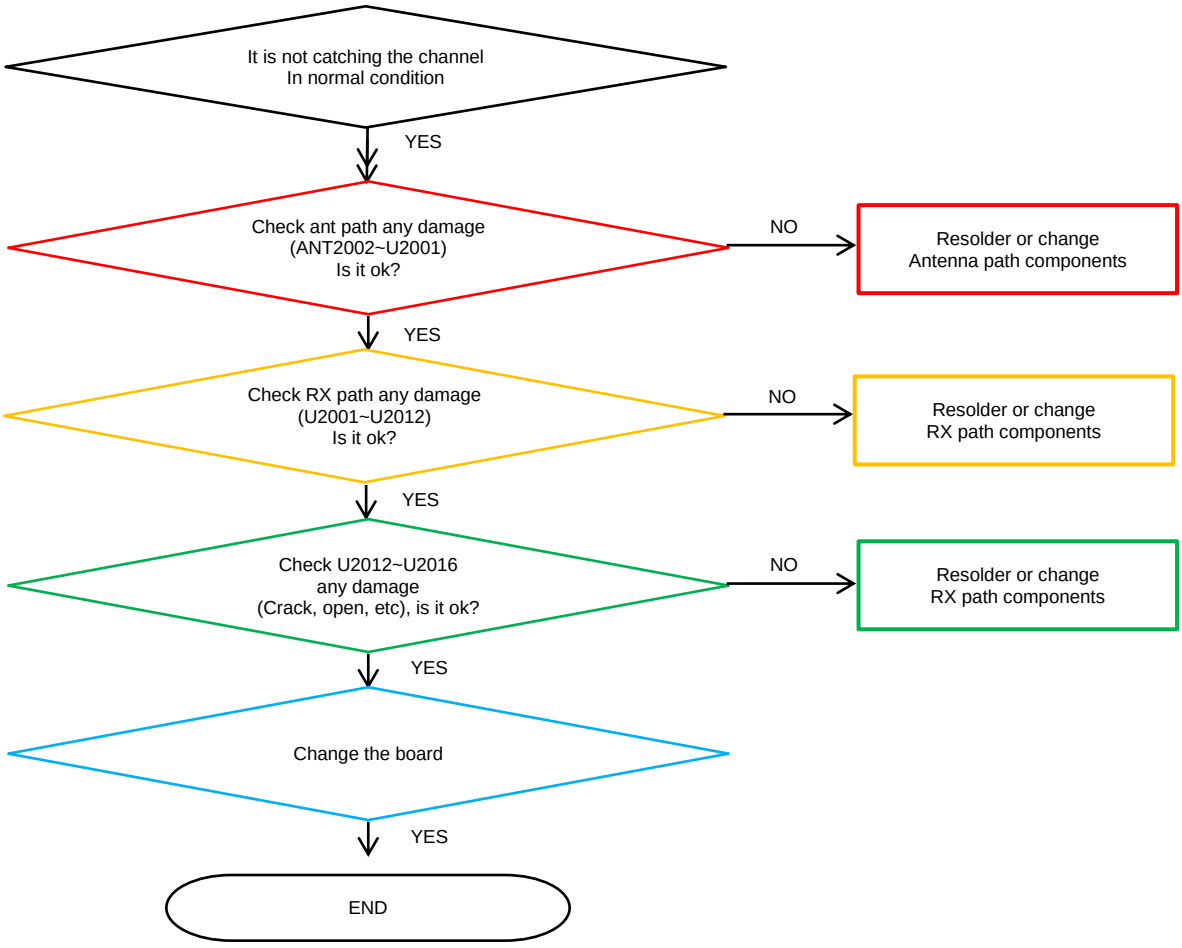
8-4-24. GSM 850/900, WCDMA B5/8, LTE B5/8/20 DRx



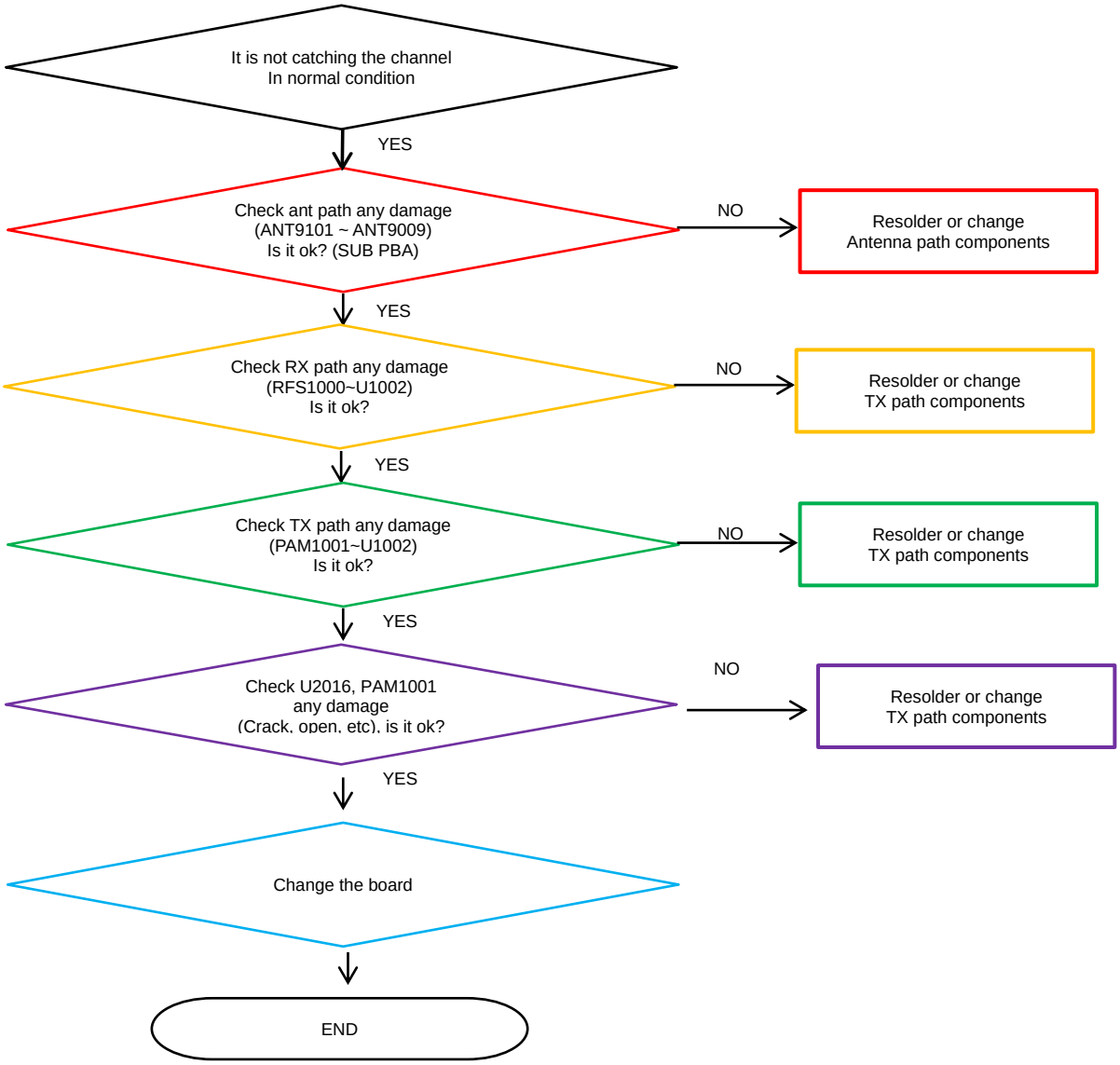
8-4-25. LTE B7/38/40/41 DRx



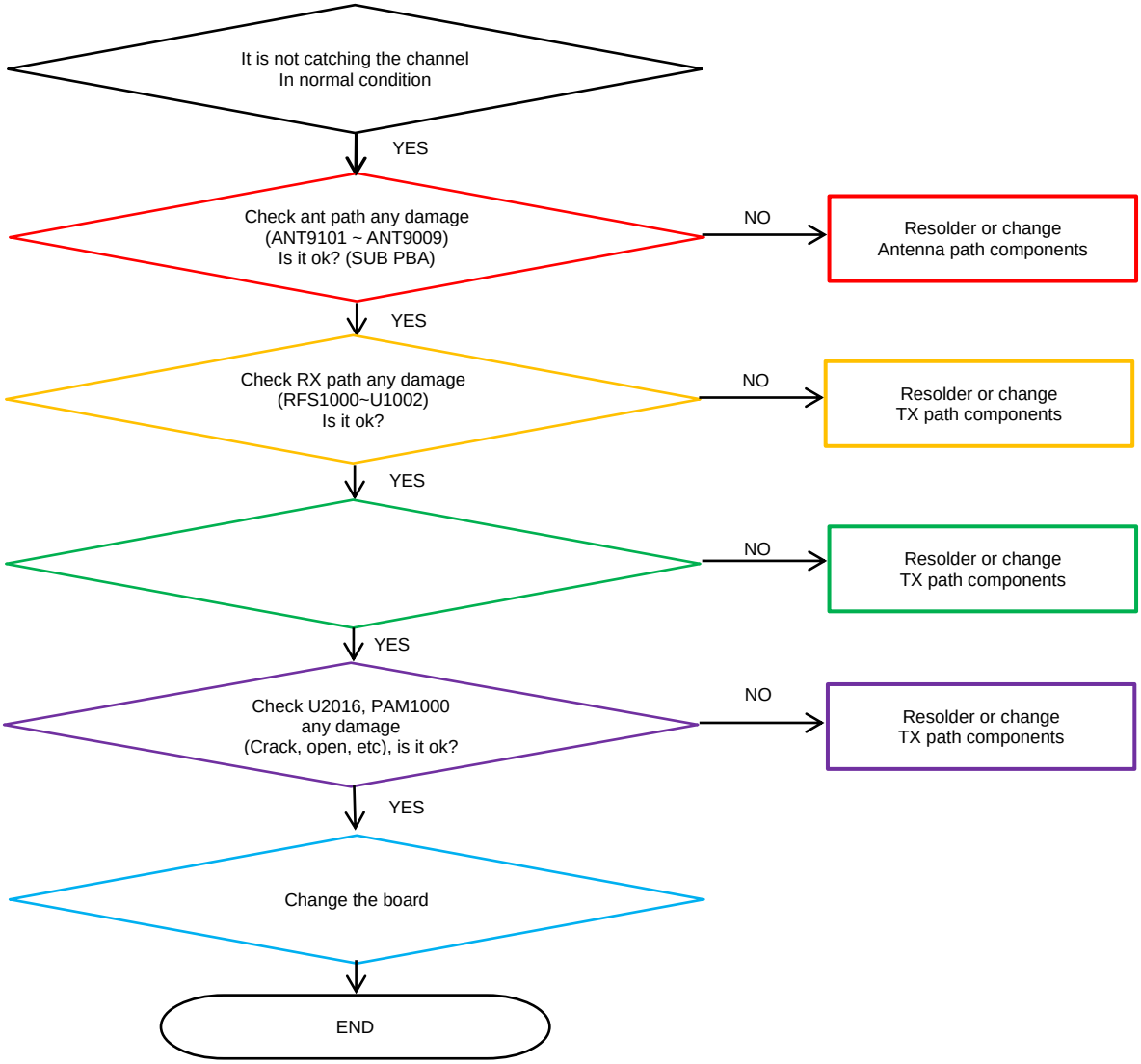
8-4-26. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 DRx



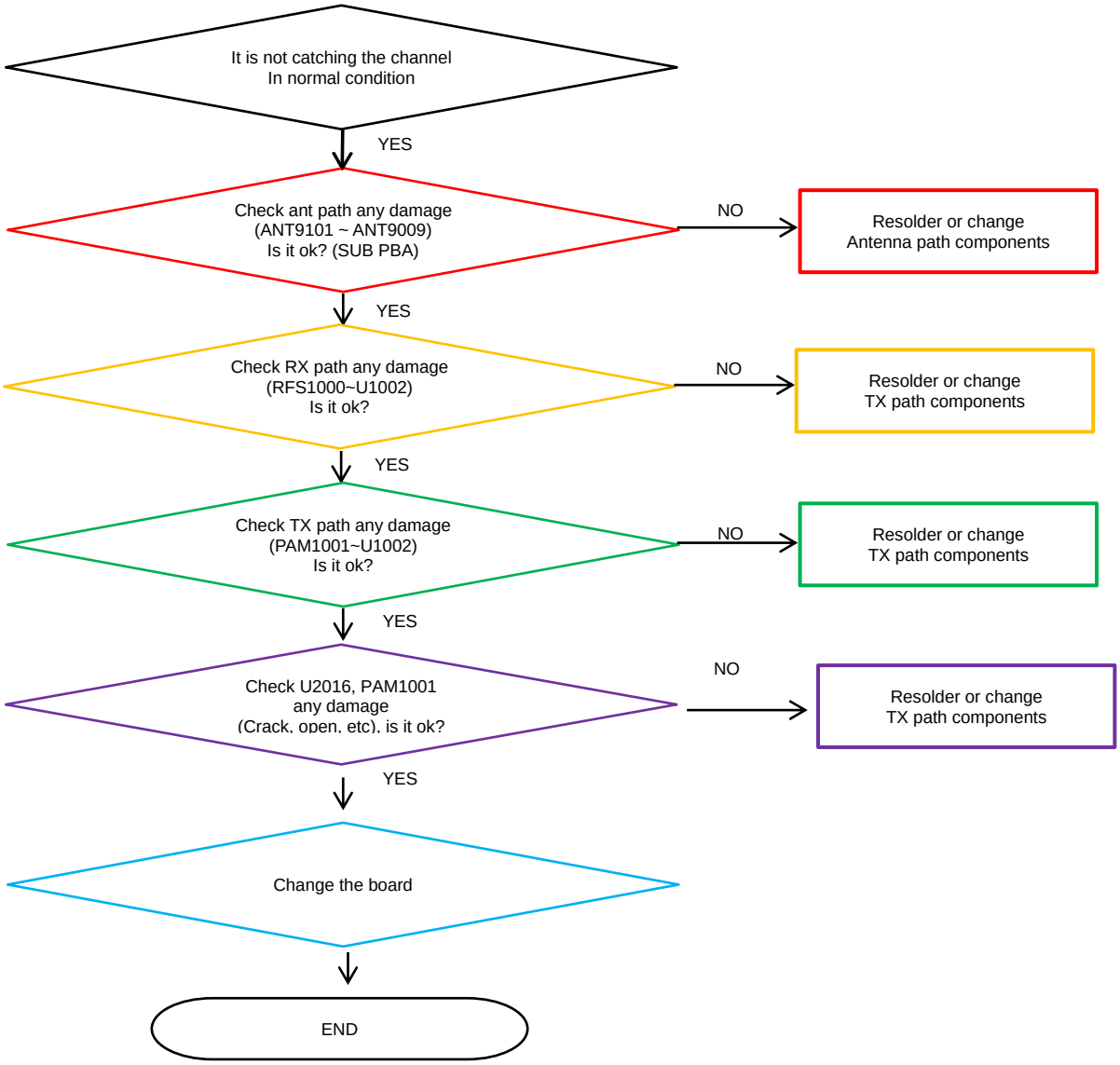
8-4-27. GSM 850/900, WCDMA B5/8, LTE B5/8/20 Tx



8-4-28. LTE B7/38/40/41 Tx



8-4-29. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 Tx



Reference Abbreviation

— **AAC**: Advanced Audio Coding.
— **AVC** : Advanced Video Coding.
— **BER** : Bit Error Rate
— **BPSK**: Binary Phase Shift Keying
— **CA** : Conditional Access
— **CDM** : Code Division Multiplexing
— **C/I** : Carrier to Interference
— **DMB** : Digital Multimedia Broadcasting
— **EN** **:** European Standard
— **ES** **:** Elementary Stream
— **ETSI**: European Telecommunications Standards Institute
— **MPEG**: Moving Picture Experts Group
— **PN** : Pseudo-random Noise
— **PS** : Pilot Symbol
— **QPSK**: Quadrature Phase Shift Keying
— **RS** : Reed-Solomon
— **SI** : Service Information
— **TDM** : Time Division Multiplexing
— **TS** **:** Transport Stream

SAMSUNG